November 14, 2011

SOUTH CAROLINA DEPARTMENT OF HEALTH & HUMAN SERVICES

STATE MEDICAID HIT PLAN (SMHP) VERSION 4.2

South Carolina Medicaid Electronic Health Record (EHR) Incentive Program

2010-2015

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Introduction

All South Carolinians, whether they reap direct benefits from it or not, are heavily vested in the state's Medicaid program. While the Medicaid eligibility limits are not as high as many other states, the program has a broader reach because South Carolina is a relatively poor state. Medicaid is second only to public education in terms of allocation of tax dollars and provides health care coverage to more than one-fifth of the state's population. Sixty percent of those covered under the program are children, and Medicaid pays for more than half of all in-state births.

Unfortunately, access to programs like Medicaid does not guarantee acceptable health outcomes. For a variety of reasons, South Carolina has lagged behind much of the nation in terms of health status, ranking 46th in 2009 (United Health Foundation). This has profound long-term economic and social implications for the state. Several years ago, the South Carolina Department of Health and Human Services (SCDHHS) began a concerted effort to alter the traditional Medicaid delivery model. In order to address the alarming rates of heart disease, strokes, and childhood obesity among beneficiaries, it is no longer sufficient for Medicaid to simply serve as a payer of claims.

The new goal was to create a value-driven system that emphasizes improved health outcomes for Medicaid beneficiaries and incentivizes quality care. A blueprint of this plan, called *Healthy Connections*, was submitted to the Centers for Medicare and Medicaid Services (CMS) in 2006. Important elements of that plan included investing in preventive care and care coordination, making data available to providers so they can make better clinical decisions, measuring quality care through the use of Healthcare Effectiveness Data and Information Set (HEDIS) data and other measures, and engaging Medicaid beneficiaries as never before to help them make good decisions about their own health. In short, the *Healthy Connections* plan represented where SCDHHS wanted to take the Medicaid program, with the recognition that the agency lacked all the tools necessary to reach the destination.

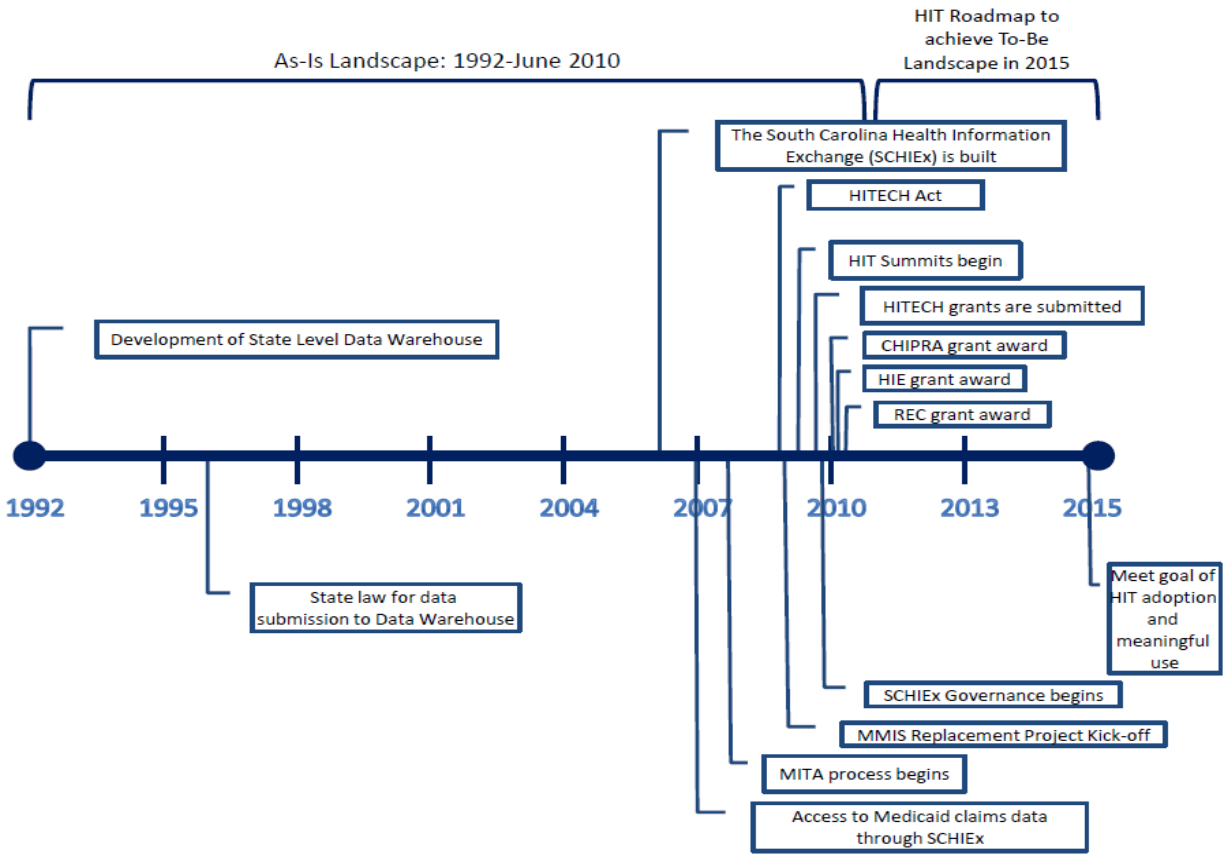
Several initiatives on both the state and federal level have since opened up new opportunities to make many of the broad goals outlined in *Healthy Connections* a reality.

- Prior to 2007, a low percentage of Medicaid beneficiaries in South Carolina received coordinated care services. This also meant that the agency lacked robust HEDIS measurements on which to gauge quality and improve the clinical soundness of policies. During the summer of 2007, SCDHHS began *Healthy Connections Choices*, a voluntary coordinated care program that offers beneficiaries a choice among several care management organizations in their county. Today, approximately 70 percent of eligible beneficiaries have elected to be part of either a managed care organization (MCO) or the state's primary care case management program. This is allowing the agency to gather important comparative data from the plans and ultimately to pay for quality outcomes. SCDHHS currently publishes a Medicaid Cost and Quality Effectiveness Report on the managed care plans. As SCDHHS begins to learn about the new Children's Health Insurance Program Reauthorization Act of 2009 (CHIPRA) quality measures, SCDHHS will determine how to include this additional data in future reports.

- The CHIPRA legislation offers the opportunity to make great strides in serving the Medicaid program's core population. South Carolina is the recipient of a $9.2 million CHIPRA Quality Demonstration Grant designed to demonstrate that newly-developed quality indicators can be successfully utilized in pediatric practices. Goals include sharing key clinical data through a statewide electronic quality improvement network, developing a physician-led peer-to-peer quality improvement network, and expanding the use of pediatric medical homes to address mental health challenges of children in the state. The initial pilot will involve 15 pediatric practices across the state.

- Perhaps most significantly, the passage of the American Recovery and Reinvestment Act (ARRA) and the subsequent Health Information Technology for Economic and Clinical Health (HITECH) Act has greatly accelerated South Carolina's progress towards implementing a widely available statewide health information exchange (HIE). SCDHHS partnered with the state's Office and Research and Statistics (ORS) in 2006 on the Electronic Personal Health Record (EPHR) pilot program. The aim of the pilot was similar to that of the current federal health information technology (HIT) program—to arm physicians with a comprehensive patient history, allowing them to make the best clinical decisions possible. The EPHR pilot began as a five-county pilot and made 10 years worth of claims data warehoused at ORS available to providers through a secure web portal. EPHR has since developed into the South Carolina Health Information Exchange (SCHIEx), the state's recognized HIE and a recipient of a $9.5 million grant from the Office of the National Coordinator (ONC).

SCDHHS has always had a steady presence in advancing HIT efforts in South Carolina. A brief timeline of events follows (see following page) showing the milestones met and those to be achieved in the South Carolina HIT landscape:



With the passage of the HITECH Act, SCDHHS emerged as a leader to facilitate assembling the infrastructure to make it possible for providers to become meaningful users. For the purposes of this document, the "As-Is" period is defined as 1992 through June 2010, and the "To-Be" period is 2015. July 2010 through 2014 is the period known as the HIT Roadmap for South Carolina.

SCDHHS is grateful for the support and resources federal agencies have committed to making improved health outcomes and quality care a centerpiece of the Medicaid program. The following document represents a detailed plan on how SCDHHS will leverage existing resources to advance HIT and make it available to health care providers across the state.

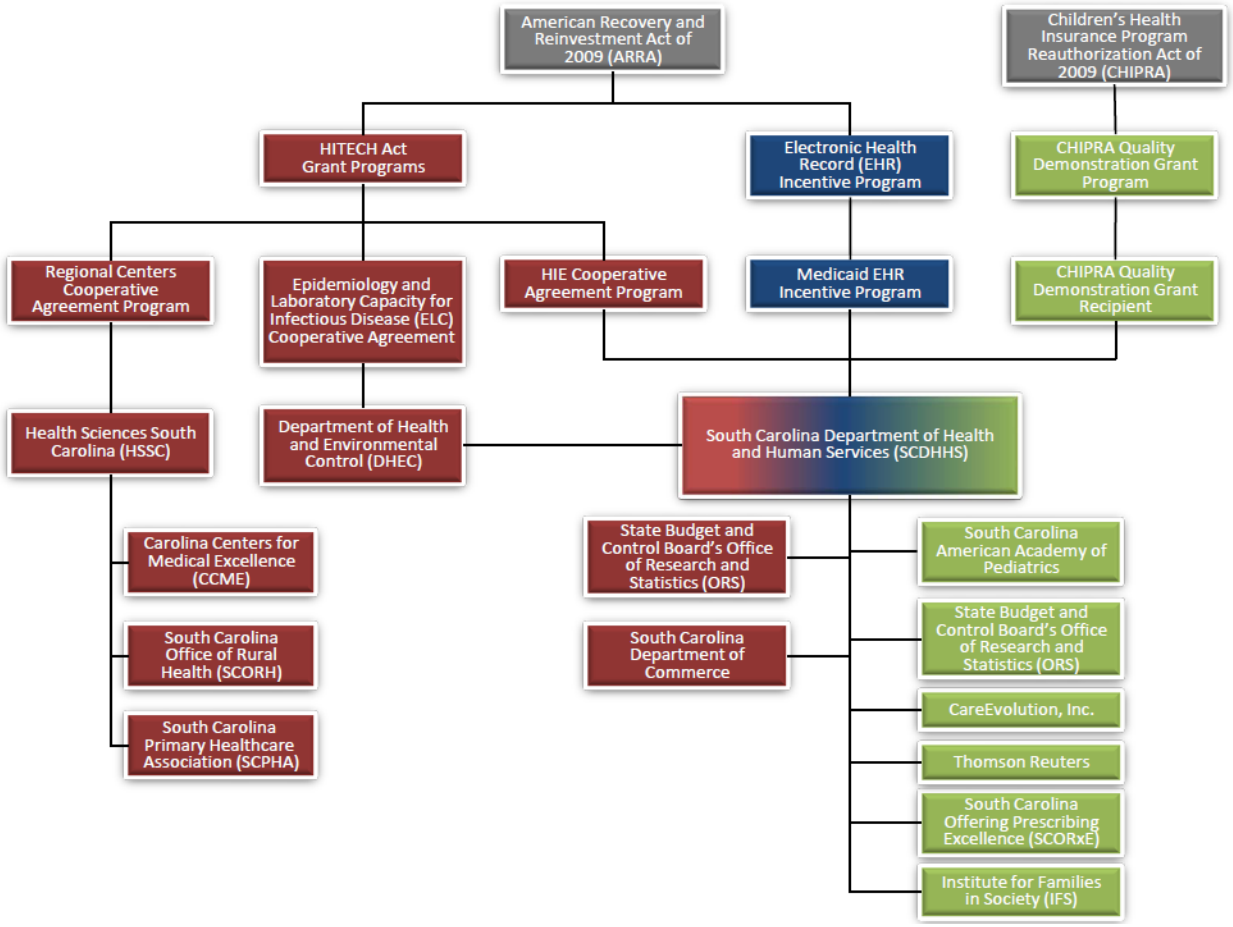
Section A: The "As-Is" HIT Landscape

Role of Medicaid in State HIT Coordination

SCDHHS is dually invested in the state's HIT efforts, as it is the state agency designated by the governor to receive the HIE Cooperative Agreement and is also responsible for administering the South Carolina Medicaid Electronic Health Record (EHR) Incentive Program.

Previously, the SCDHHS Director and the ORS Chief of Health and Demographics together performed functions that fall within the State HIT Coordinator's responsibility. Following changes in SCDHHS' executive leadership in early 2011, the ORS Chief of Health and Demographics assumed all HIT Coordinator responsibilities.

As grants became available, Medicaid leveraged the ongoing work to further expand and strengthen the infrastructure to support HIT adoption and achieving meaningful use. Below, the South Carolina Medicaid role is shown in context with some of the HIT activities currently underway in the state:



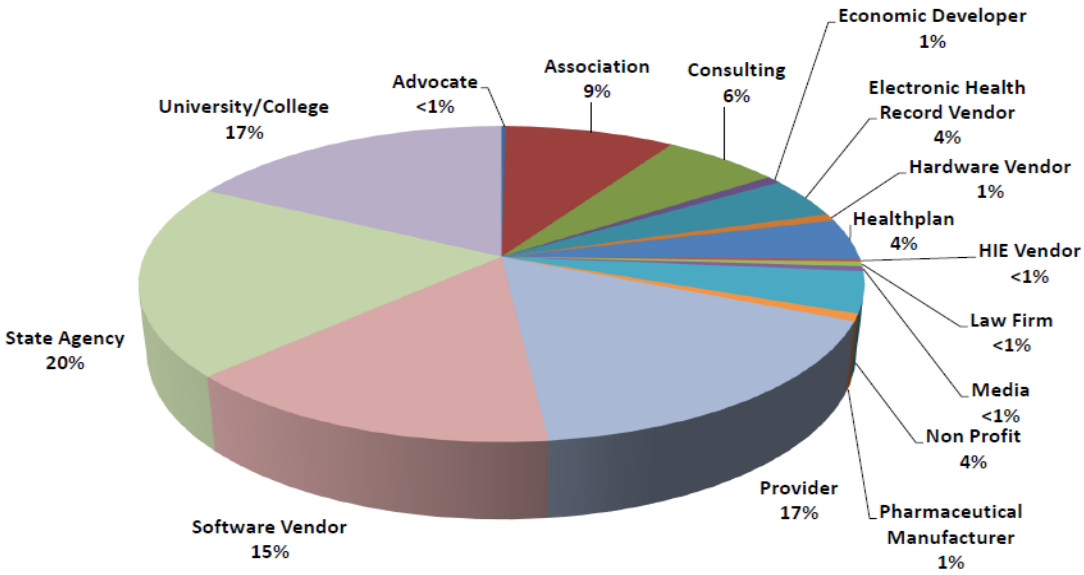
As SCDHHS is responsible for administering and overseeing the South Carolina Medicaid EHR Incentive Program, the agency has worked to gather stakeholder input during the development of this State Medicaid HIT Plan (SMHP). SCDHHS presented on the EHR Incentive Program and South Carolina's plan for development of the South Carolina Medicaid EHR Incentive Program during South Carolina's HIT summits. These summits have been consistently attended by stakeholders throughout the state and are open to the public. The summits have and will continue to provide a venue for stakeholder input and feedback on the South Carolina Medicaid EHR Incentive Program. Further, SCDHHS posted its SMHP on its HIT website (http://www.scdhhs.gov/hit) and coordinated the SMHP development with the HIE Cooperative Agreement strategic and operational plans.

HIT Summits of South Carolina

When the ARRA legislation was signed, SCDHHS, ORS, and Health Sciences South Carolina (HSSC) came together and formed an e-Health group. The group initiated a series of monthly HIT summits beginning in June 2009. The summits provide the private sector, state government, providers, non-profit organizations, universities, and other stakeholders with the opportunity to come together to assess the current status of HIT and HIE in South Carolina and develop a cohesive state strategic plan to move forward. To date, 186 organizations and 465 unique individuals have attended. The chart below lists the theme of each summit and individual summit attendance numbers.

Summit Date	# of Attendees	Topics
6/17/09	114	What's going on in South Carolina HIT?, Provider issues, HIE
7/29/09	141	Meaningful Use, HIE selection, Governance, Provider issues
8/27/09	157	Privacy and Security
10/1/09	136	Experience & Success with EMRs and Workforce Readiness
10/29/09	146	Who are the vendors?
12/10/09	104	Consumers and e-Prescribing
1/13/10	113	Security, the Interim Rule for the EHR Incentive Program and Standards/Certification for EHR technology
4/22/10	127	Getting Started on Implementation of HIT
8/18/10	126	The Age of Electronic Health Records is Here
11/18/10	98	SC Medicaid EHR Incentive Program and Connecting to SCHIEx
10/2011	-	To be announced

The summits have been well attended by a broad representation of stakeholders across the state:



During the early summits, participants reached two significant consensus points—the development of a cohesive vision statement with guiding principles and leveraging the SCHIEx platform to be the statewide HIE solution. Summit meetings transitioned from monthly to quarterly following the April 2010 Summit. Past summit presentations and other materials are available at http://training.scdhhs.gov/hit/

South Carolina HIT Vision Statement:

> Our vision is for a healthier South Carolina where shared health information is a critical tool for improving the overall performance of the health care system. The health care community will work together to achieve clinical effectiveness through the use of information technology, delivering better overall value and improving quality of life for South Carolinians.

Guiding principles to enable the vision:

1. Individual consumers, patients, and their families will be engaged in and benefit from implementation of the HIT plan.
2. Privacy and security will drive HIT selection, implementation, and support.
3. HIT will greatly facilitate coordination of care.
4. HIT is a vital tool to improve population & public health.
5. Evaluation of the effectiveness of using HIT data to improve health outcomes will be integrated into the HIT plan.
6. Access to care will be improved and disparities in care will be reduced using HIT.

7. Training & support will be available throughout the state.
8. Continuous improvement in quality, safety and efficiency will be aided by using HIT.
9. Adoption of standards and the requirements of interoperability are essential to the success of the HIT plan.
10. HIT will greatly facilitate translational, population-based and health services research.

State Strategic and Operational Plans

The state's strategic and operational plans (deliverables for the HIE Cooperative Agreement Program; see Grant Activities) were developed with significant stakeholder input; presented and discussed at the monthly summits; and were available for public comment on the HIT website. Both plans were submitted to the ONC in April 2010 and received approval in September 2010. Version 2.0 of both plans was submitted to the ONC in February 2011 in accordance with the annual update requirement.

Provider EHR Adoption

Environmental Scan

We conducted a cross sectional survey of hospitals and primary care practices to ascertain their:

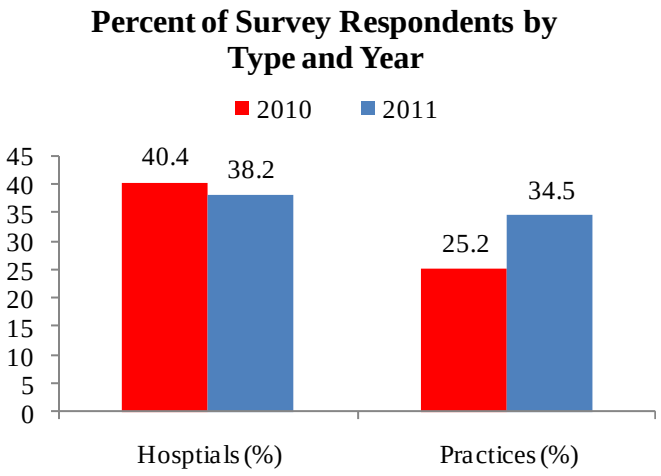
- Knowledge of federal initiatives, incentives, penalties...
- Current EMR/EHR adoption & functionality
- HIE readiness
- Plans for adoption – financial, staffing, training...
- Anticipated costs & related expectations
- Collection of quality indicators

Surveys were mailed beginning in April 2011, with a second follow-up mailing in May 2011. Institutional Review Board approval was obtained from the University of South Carolina. Analysis was conducted by researchers at the South Carolina Rural Health Research Center in the Arnold School of Public Health, University of South Carolina. This survey administration is a repeat from the initial environmental scan conducted in late 2009, which provided baseline information for the state's HIT landscape and served as a resource for the HIE strategic and operational plans and the State Medicaid HIT Plan. To enhance response rates in both years, the SC Office of Rural Health, SC Hospital Association, and SC Primary Health Care Association sent email messages to encourage their members and constituents to respond to the survey.

Mailing addresses for **104** licensed hospitals were obtained from the Department of Health and Environmental Control, which maintains the licensure files for all hospitals in South Carolina. Physician practice addresses were obtained through the Office of Research and Statistics using the Medicaid provider file linked to the NPI, yielding 1,495 practice networks in 2009. Based on the response to the

original survey, we eliminated 185 practices from the mailing list because they were not primary care providers, retired, or no longer at the address provided. A total of **1,310** practices were mailed surveys in 2011. The impetus of the survey was to enrich our understanding of HIT adoption issues at the organization-level and not the physician-level, therefore only one survey was sent to each practice network. Said differently, if an organization owned 40 physician practices, only one survey for was mailed on behalf of the 40 practices.

Description of Respondents



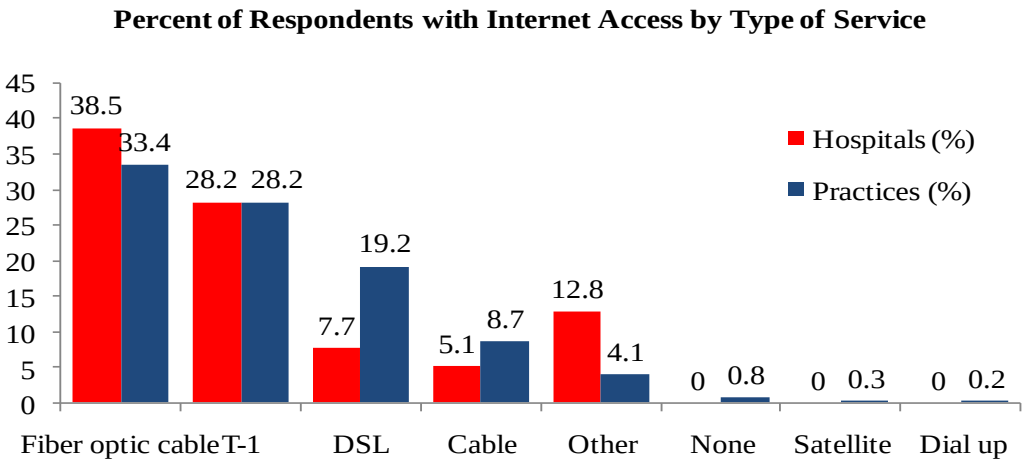
Hospitals. With a response rate of 38.2% (n=39), most respondents identified themselves as acute care hospitals (56.4%).

Practices. Physician practices responded at a rate of 34.5% (n=452). Of the total respondents, 26 respondents were excluded from the analyses because they were specialty providers (e.g., oncology, cardiology, and dermatology practices, inpatient departments, dialysis units), or the practice was closed. The final population was 426 respondents, reflecting 1066 practice sites. Most practices were single-specialty (19.8%), multi-specialty (18.6%), or small group primary care (17.4%). Noteworthy practice types in the distribution of responses include Rural Health Clinics (10.0%) and Federally Qualified Health Centers (10.8%).

There was a slight decrease in the response rate for hopitals in 2011 (38.2% in 2011 vs. 40.4% in 2010) while the response rate for physician practices increased by 9.3%.

Internet Access

All of the hospital respondents reported internet use; less than 1% of the physician practices did not have internet access. Hospitals were more likely to use fiber optic cables (38.5%) and T-1 lines (28.2%). Similarly, physician practices were more likely to use fiber optic cables (33.4%), T-1 lines (28.2%), and DSL (19.2%). Compared to the results in 2010, there was an increase in the use of fiber optic cable for an internet connection among physician practices in 2011.



Knowledge of Federal Initiatives, Incentives and Penalties

In general, knowledge of the various federal incentives for EMR adoption was moderate. Primary care practice respondents reported greater rates of knowledge than hospital respondents. Among the former, business managers were the most knowledgeable and CEO/COOs in the latter.

For hospitals, less than 50% were knowledgeable of the ARRA components (46.2%); 35.9% were knowledgeable of the HITECH provisions, 38.5% were knowledgeable about meaningful use criteria, 33.3% aware of the EMR incentive program, 35.9% were knowledgeable of the potential penalties for late adoption, and only 17.9% were knowledgeable of the assistance offered by the Regional Extension Center.

Among physician practices, knowledge of the various federal incentives for EMR adoption was higher than among the hospitals. Nearly two-thirds were knowledgeable of the ARRA components (62.1%); 59.7% were knowledgeable of the HITECH provisions, 61.3% were knowledgeable about meaningful use criteria, 61.3% aware of the EMR incentive program, 59.0% were knowledgeable of the potential penalties for late adoption, and only 34.1% were knowledgeable of the assistance offered by the Regional Extension Center. The table below summarizes knowledge changes among primary care practice respondents from 2009 to 2011. Greatest knowledge gains were observed for incentives and penalties for EMR adoption.

Percent of Respondents from Primary Care Practices with Knowledge of HIT-related Initiatives

Initiative Type	Respondents (2009)	Respondents (2011)
American Recovery and Reinvestment Act (2009)	62.1%	66.3%
HITECH Act	59.7%	60.9%
Meaningful Use Criteria	61.3%	55.5%
Incentive Program for EMR adoption	61.3%	71.9%
Potential penalties for delayed EMR adoption	59.0%	70.7%
Awareness of Regional Extension Center technical support	34.1%	33.1%

Status of Electronic Medical Record Adoption

Storage of Patient Information. Nearly half of hospitals (48.7%) and almost 60% of physician practices reported using EMR to store patient medical information. Most hospital and physician practices, however, store patient data in multiple forms. More than 28% of hospital and 26% of physician practices reported using practice management programs and paper records together with an EMR. Many hospitals (35.9%) and physician practices (24.1%) reported using only paper records.

Compared to results from 2009, the proportion of hospitals reporting the use of EMR to store patient records **decreased from 57% to 48.7%,** while the proportion of physician practices **increased** from 38%.

Degree of EMR Implementation. When asked where they were on the continuum of EMR adoption, one-third of the responding hospitals (33.3%) reported they purchased an EMR and were beginning to implement it. One-fifth (20.5%) said they were using an EMR and it was working well, while nearly 13% reported that their EMRs were not working as well as expected. Another 13% identified that they were making plans and preparing for EMR implementation.

For physician practices, the majority of the practices reported that they were implementing EMRs (38.6%) or beginning an implementation of EMR (29.4%). Less than one-third (29.6%) reported that their EMR was working well, with 9% reporting their EMR was not working well. Few hospitals and physician practices (5.1% vs. 4.7%) reported not considering EMR adoption.

The proportion of those not considering EMR adoption or having no specific plans for implementing an EMR has largely **decreased by more than 15%** since 2009.

Financial Preparations for Adoption or Upgrades. When asked how to financially obtain or upgrade EMR, more than a third (35.9%) of hospitals reported they would apply for CMS incentives and more than a quarter (25.6%) would purchase EMR equipment and software outright. Inversely, more physician practices (30.0%) chose outright purchasing over applying for a CMS incentive (15.9%) or obtaining a loan (8.7%). It is important to note that nearly 16% of physician practices reported they would not upgrade their current EMR or implement an EMR.

Outright purchasing and applying for CMS incentives were two main financial methods for hospitals and physician practices to pay for EMR adoption or upgrades in both 2009 and 2011. Notably, there was an **increased proportion** of practices reporting **outright purchasing** in 2011(30.0%), compared to 19.2% in 2009.

EMR Incentive Applications. Hospitals were more likely to pursue EMR incentives from both Medicaid and Medicare (48.7%) while some reported applying for only Medicare incentives (7.7%) with few applying for only Medicaid incentives (2.6%). Similarly, over a quarter (29.4%) of physician practices reported applying for incentives from both Medicaid and Medicare while 27.5% chose incentives from only Medicare and 17.4% chose incentives from only Medicaid. A smaller, yet large, proportion of hospitals (20.5%) and physician practices (15.1%) said they did not plan to apply for an incentive, while an addition 20.5% of hospitals 10.6% of practices said they were unsure at the time of the survey.

HIE Participation. A majority of the hospitals and primary care practices reported that they did not participate in a health information exchange (HIE) (57.7% of hospitals vs. 61.9% of physician practices). However, about half of these respondents said they actually exchanged patient data (19.2% of hospitals vs. 16.1% of physician practices) despite the lack of a formal HIE. In comparison with the 2009 results, there was **no change** in the proportion of healthcare providers who participated in HIE in 2011. Also, there was no improvement in actual exchange of patient data among providers who participated in HIE.

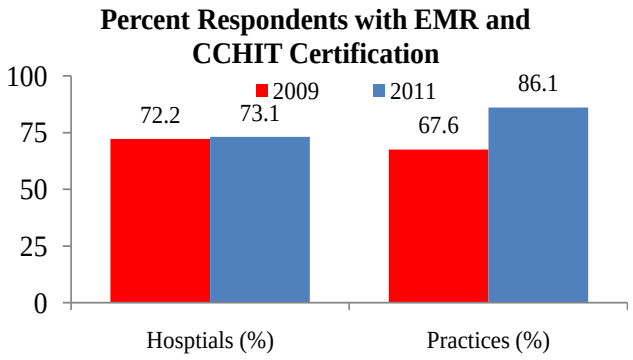
Training Needs. The most frequently reported training needs were information exchange for hospitals (69.2%) and workflow redesign for physician practices (59.2%). In addition, more than half of hospitals requested training on computer literacy, electronic clinical documentation, workflow redesign, federal incentives, and meaningful use criteria. More than half of the physician practices reported training needs in information exchange, electronic clinical documentation, and deferral incentives. Training on other funding opportunities (48.7% hospitals; 35.8% physician practices) and NCQA standards (48.7% hospitals; 40.1% physician practices) were less likely to be requested.

Compared with the results in 2009, the recent training needs on most of these topics such as workflow redesign, federal incentive, and meaningful use criteria slightly changed. However, for hospitals, the training needs on **electronic clinical documentation sharply increased** by 14%. For physician practices, the current training needs on other **funding opportunities and NCQA standards significantly decreased** by 15% and 10%, respectively.

Assessment of EMR Users

Overall, most hospitals (73.1%) and physician practices (86.1%) with EMRs reported having certification from the Certification Commission for Health Information Technology (CCHIT). There was similar agreement when asked if their EMRs met their patient care needs, with 65.4% of hospitals and 85.1% of practices reporting that the EMR does meet these needs.

There is a **substantial increase** in physician practices having EMRs certified by CCHIT, from 67.6% in 2009 to 86.1% in 2011. However, the proportion of practices in which EMRs met the needs in providing patient care in 2011 slightly decreased to 85.1%, compared to 89.5% in 2009. For hospitals, no significant changes in the percentages of those having CCHIT certification and those expressing acceptance of their patient care were observed.



Perceived Changes in Productivity. When asked about the impact that EMR usage has had on productivity during the first 3-6 months, after one year, and at 3-5 years of EMR implementation, hospitals were more likely to report major improvements in productivity across the three different periods (23.1% for a 3-6 month period, 34.6% for a 1-year period, and 26.9% for a 3-5 year period). But, the perceived impact of productivity for physician practices was varied. For the first 3-6 months, more than a third (33.9%) of practices reported major decreases in productivity, compared to only 19.2% of hospitals. After one year, more practices (27.6%) reported minor decreases in productivity. When moving further to a 3-5 year period, however, more practices (36%) said they did not know the impact of EMR on productivity while about 16.6% perceived a major improvement in productivity. It is apparent that hospitals were likely to perceive the benefit of EMR adoption in improving their productivity while more practices experienced decreases in their productivity especially in a short period of EMR implementation.

Assessment of Facilities without EMRs

Implementation Barriers. When asked about barriers to EMR implementation, virtually everyone attributed costs, both initial and recurring, as an obstacle. Staff expertise with EMRs was frequently cited as a barrier to EMR implementation for both hospitals (50.0%) and practices (53.6%). Lack of EMR interoperability with other information systems was highly reported by most hospitals (58.3%), but few of the physician practices (14.3%). Productivity disruption was a great concern of physician practices (61.6%) but not for hospitals (16.7%).

Major barriers for EMR implementation cited in 2009, such as included costs of implementation and staff expertise for both hospitals and practices, lack of EMR interoperability with other systems for hospitals, productivity disruption for practices, continued to be highly reported in 2011. However, fewer physician practices reported uncertainty of EMR products (36.7%) in 2011 than the proportion reported (67.3%) in 2009.

EMR Investment Timeline. Almost half (41.7%) of hospitals and over half (69.0%) of practices without an EMR reported that they would invest in an EMR within 1 or 2 years. A third (33.3%) of hospitals and only 11.5% of practices were unsure of their timeline.

EMR Adoption Characteristics

Logistic regression analyses were conducted to determine certain providers' characteristics associated with having EMRs or planning to adopt EMRs in the next two years. Internet access was the only a significant indicator found in the final model. Healthcare providers who lacked internet access or used dial-up services for an internet connection were less likely to have adopted an EMR. In addition, among those without EMRs, those using satellite, T-1 lines, or fiber optic cables were more likely to express plans for EMR adoption in the next 24 months.

In 2009 analyses, two indicators, method of internet access and academic affiliation, were associated with EMR adoption. However, for this current analysis, academic affiliation was found insignificant.

Conclusion and Recommendations

Comparing the 2009 and 2011 environmental scans, there have been improvements in the degree to which healthcare providers are moving through the EMR adoption curve. We continue to see weakness, however, in HIE and understanding what it means to achieve meaningful use criteria. Based on the participants' responses, the following recommendations are worth considering in order to facilitate greater EMR adoption and HIE participation.

1. Continue to address the knowledge gap. Slight increases in knowledge of ARRA and HITECH and robust increases around incentives and penalties for EMR adoption were observed in the 2011 environmental scan. However, respondents indicated they had a slight decrease in knowledge of the REC and a moderate decrease in meaningful use criteria. Given that the REC has achieved its ONC goal of recruiting 1,000 providers into its program, perhaps outreach diminished at the time of the current environmental scan. In fairness to the REC, they would need additional resources to provide assistance to more providers, an allocation that is unlikely to come from the ONC given the current economic projections. With regards to meaningful use, the criteria has changed since the initial environmental scan so it is understandable that respondents would feel insecure about their knowledge in this area.

Moving forward, it appears that additional outreach and education on targeted EMR issues may be necessary, especially for meaningful use criteria. The state had previous success in reaching healthcare providers in a series of HIT Summits.

2. Assist EMR users with optimizing functionality. – While it was encouraging to see a significant increase in the proportion of physician practices using EMRs that are CCHIT, there was a decrease in

respondents indicating their products met their patient care needs. One potential explanation is their EMR functionality has not been maximized. Users of the REC have the benefit of working directly with service contractors who are providing a good bit of 'hand holding' to demonstrate how to optimize the functionality of the EMR that was purchased. This service goes beyond that which is available through EMR vendors. As evidenced in the REC evaluation report to the ONC, a high degree of satisfaction has been reported from practices who receive this type of technical assistance from the Carolinas Center for Medical Excellence. Unfortunately, everyone does not have access to this benefit.

3. Provide technical assistance on workflow redesign. Workflow redesign was the most frequently requested training need by physician practice respondents, which may explain some of the challenges expressed around EMRs not meeting patient care needs. As with EMR functionality, workflow redesign is a service available through the REC but is limited to the 1,000 providers served by it. Given the environmental and process-nature of the need, peer-learning may not be an appropriate solution as it may be with EMR functionality. Broad scale education on how to conduct workflow redesign assessments and facilitate organizational changes could be delivered through workshop formats. Unfortunately, the practical redesign activities likely will require the type of 'handholding' only available through individual-level support.

4. Enhance HIE participation. There was no change between the 2009 and 2011 Environmental Scans with regards to HIE participation, with the vast majority of respondents reporting they do not participate. There does, however, seem to be momentum for it given that a significant proportion of non-HIE respondents reported they are sharing patient information in the absence of participating in a formal HIE. Unfortunately, among those who indicated they are HIE participants, no improvements in the exchange of data were observed. Implicitly interpreted, there seems to be an energy for HIE and an understanding of the conceptual benefit to participating in one, however the actual benefit has yet to be realized by existing participants. It was noteworthy that HIE was the most frequently identified training need by hospital respondents. More than half of physician practice respondents identified it as a need.

5. Facilitate financial preparation for EMR adoption. As in the 2009 environmental scan, the most significant barrier to EMR adoption and information sharing reported by respondents was the cost, both initial and recurring. In both environmental scans, outright purchasing and CMS incentives were the most frequently cited source of financing EMR adoption activities. There was a significant increase in the proportion of physician practices reporting they will outright purchase an EMR (30.0% v. 19.2%). Hospitals were more likely to pursue EMR incentives from both Medicaid and Medicare, which was not a big change from the previous environmental scan. For those purchasing EMRs, they seem to be using informed financial plans given the sharp increase in knowledge about incentives. While education will remain a priority, additional financial solutions should be identified for those who opt not to pursue (or are ineligible for) CMS incentives.

In summary, South Carolina has demonstrated improvements in EMR adoption but not in HIE participation. Education on meaningful use, assistance with EMR functionality and workflow redesign, demonstrating HIE benefit, and financial preparation for HIT adoption continue to be critical to ensuring

the successful migration of South Carolina's healthcare providers into the electronic age. While the REC is meeting the needs of many targeted providers, many more lack access to the type of intensive, direct services needed to address the aforementioned challenges.

Encouraging Provider Adoption

SCDHHS is leveraging the Center for Information Technology Implementation Assistance in South Carolina (CITIA-SC, South Carolina's Regional Extension Center) and the CHIPRA Quality Demonstration Grant to encourage provider adoption, as both of these programs engage providers in adopting certified EHRs and finding the most suitable ways to utilize HIT in the providers' practice setting. CITIA has reached its goal of recruiting 1,000 providers to receive CITIA services. Having met its goal, CITIA is now focusing its efforts on assisting providers with the selection of certified EHR technology and meeting meaningful use.

Coordination with Managed Care Entities

As the majority of South Carolina's Medicaid population is enrolled in a managed care plan, SCDHHS has coordinated its planning efforts for the South Carolina Medicaid EHR Incentive Program with the South Carolina Medicaid managed care plans. The managed care plans are informed of SCDHHS' HIT summits and have had a steady presence at the summit meetings since June 2009. The HIT summits are one of the ways SCDHHS offers to stakeholders to comment on SCDHHS' plans for the South Carolina Medicaid EHR Incentive Program. The SCDHHS agency director and the HIT Division Director also presented at a monthly managed care meeting to provide updates to the plans on the South Carolina Medicaid EHR Incentive Program.

Coordination with the Catawba Indian Nation

The Catawba Indian Nation is the only federally recognized Indian tribe in South Carolina. Located eight miles east of Rock Hill, South Carolina, the Catawba tribal roll contains approximately 2,200 names.

While preparing their regional extension center application, HSSC conducted a site visit in the fall of 2009 and toured the single health facility on the reservation. The facility uses an advanced EMR system that is part of the Indian Health System (IHS). Chief Don Rogers indicated that though the clinic does not need direct EMR assistance, they will require assistance in connecting their system to SCHIEx. HSSC also provided a letter of support for the IHS regional extension center initiative.

SCDHHS maintains a positive working relationship and frequent communication with the Catawba Indian Nation. An SCDHHS liaison is the established contact for the agency, and during regular outreach, the Deputy Director provides information on SCHIEx, the Medicaid EHR Incentive Program, the HIT summits, and other resources to the clinic. The Catawba Indian Nation has also been invited to the HIT Summits. During onsite visits, information packets were shared with the clinic that contained information developed specifically concerning the South Carolina Medicaid EHR Incentive Program including educational brochures (a component of SCDHHS' educational campaign for providers on HIT) and SCDHHS website information where the SMHP was posted for stakeholder review. The clinic administrator is also a member of the Medical Care Advisory Committee (MCAC) where SCDHHS routinely reports updates on the HIE Cooperative Agreement and other HIT efforts. The Catawba Indian Nation has indicated to SCDHHS that they are satisfied with this level of coordination and approach to the South Carolina Medicaid EHR Incentive Program.

Broadband Access

Results of the detailed environmental scan indicated that in spite of the rurality of South Carolina, virtually all healthcare providers have internet access. Hospitals are more likely to use T-1 lines (28.6%) and fiber optic cable (50.0%). Physician practices are more likely to use DSL (17.8%), T-1 lines (29.9%), or cable (19.9%).

The South Carolina Light Rail (SCLR) is a collaborative project among Clemson University, the Medical University of South Carolina, and the University of South Carolina and is a public-private partnership to provide a broadband, high-speed optical network that will extend throughout the state and link to regional and national networks such as Southern Light Rail, National Lambda Rail, Internet2, and SURAgrid and TeraGrid. In December 2007, the Federal Communications Commission (FCC) awarded a $7.9-million grant to South Carolina to interconnect 35 rural locations via broadband to improve healthcare intervention and service delivery. The three universities are engaged in extensive planning and due diligence over the next two years to further expand the network.

The Palmetto State Provider Network (PSPN) is a dedicated health care network. It provides private scalable broadband to every county in South Carolina. It provides Internet 2 to all participants. Internet 2 is most commonly used by government agencies (state and federal), universities, healthcare organizations, and industry. It has more bandwidth available, is easy to secure, and has very little commodity traffic. The PSPN is used to connect organizations such as the e-Health Alliance for the transport of clinical data. The PSPN is active with the South Carolina Area Health Education Consortium (AHEC) in providing training, education, and continuing education. The networks are active in the use of telemedicine across the state and delivering care into unserved and underserved areas and the rural areas of the state. Plans to expand and strengthen broadband access to the "Middle Mile" are in progress. The PSPN is funded by the FCC Rural Health Care Pilot Program. While connected to the

commodity Internet through existing state internet service providers, SCHIEx will also connect to PSPN in order to provide additional network redundancy and flexibility for those healthcare providers who are PSPN subscribers. The Division of State Information Technology (DSIT), the hosting environment for SCHIEx, currently has two internet service providers on contract, allowing for redundant access to the internet, and the PSPN will provide a third access point.

The SCLR and the PSPN represent the current network/broadband access in the state and meet the requirements of the Health Insurance Portability and Accountability Act (HIPAA) and other federal regulatory requirements. Current plans are to connect additional hospitals, FQHCs, community health centers, health departments, and prison telemedicine units.

The Palmetto State Integrated Fiber Infrastructure (PSIFI) grant will add additional components to the network's robustness. Grant funding will allow for the additional hardware and fiber to be integrated with the SCLR and will expand the "Middle Mile" to have more flexibility and be easier to connect to and therefore forming a more complex and sophisticated network. Funded through the Broadband Technology Opportunities Program (BTOP) that is administered by the National Telecommunications and Information Administration (NTIA), the PSIFI grant project provides fiber based broadband network access to all two and four year higher education anchor sites as well as over 40 medical, public safety, and public services sites in South Carolina, which totals to over 100 locations.

Grant Activities

The HIT Summits facilitated the grant application process by allowing state leaders and stakeholders to determine which organization should take the lead and ensuring that eligible organizations were aware of the grants. Collectively, grant applicants made a commitment to coordinate the grants in order to achieve the desired outcomes of HIT adoption and meaningful use.

SCDHHS and HSSC each applied for grant funding available through the HITECH Act. SCDHHS and HSSC value collaboration and close coordination of activities to meet their grants' objectives and goals. To ensure efficient use of resources, SCDHHS and HSSC share a grant coordinator to manage the grants and maintain an open, constant loop of communication between the two organizations.

The technical colleges applied for the workforce development grants and spent a good deal of time examining their curriculum to find the best ways to train and educate individuals that will work with HIT on a daily basis.

Applications were submitted for the Strategic Health Information Technology Advanced Research Projects (SHARP) Grant and Beacon Communities grants. However, neither group was selected. Both groups resubmitted their applications for review given the availability of additional grant funding.

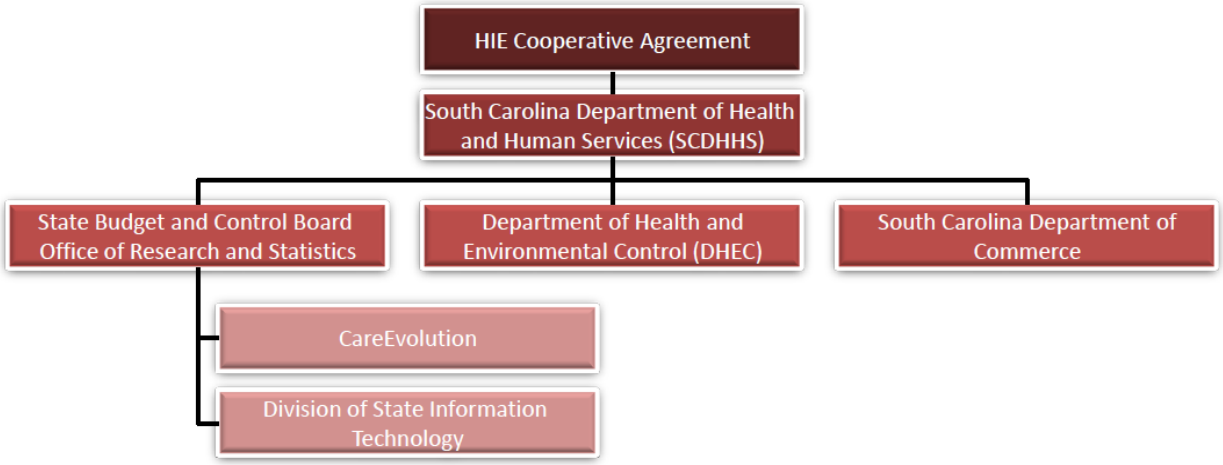
HIT leaders looked to leverage other grant opportunities that would further extend the HIT reach in South Carolina such as the CHIPRA Quality Demonstration Grant. SCDHHS submitted an application for this opportunity.

The South Carolina Department of Health and Environmental Control (SCDHEC) received the Centers for Disease Control and Prevention (CDC) Lab grant, which is significant to meaningful use requirements.

South Carolina does not have any FQHC networks that have received or are receiving HIT/EHR funding from HRSA.

State HIE Cooperative Agreement Program

SCDHHS is the governor-designated applicant for the State HIE Cooperative Agreement Program and received a grant award on March 15, 2010 totaling $9,576,408. Grant funding will support scaling SCHIEx for statewide use. Grant partners include ORS, SCDHEC, the South Carolina Department of Commerce, CareEvolution, and the DSIT:



Grant Objectives:

- Set up a governance structure for the exchange of health information;
- Transition SCHIEx to a statewide hosting environment;
- Scale SCHIEx for statewide use;
- Connect SCHIEx to the state immunization and disease registries;
- Inform providers and other stakeholders about HIT adoption and meaningful use; and
- Work with partners to remove barriers to meaningful use.

Expected Outcomes:

- Providers will adopt and use EHRs to improve patient care. (See Section C, Provider Adoption for additional information.)
- SCHIEx will become a self-sustaining operation.

SCDHHS submitted draft final strategic and operational plans to the ONC in April 2010. The plans contain all required content including a gap analysis to meet meaningful use. These plans were approved by the ONC in September 2010.

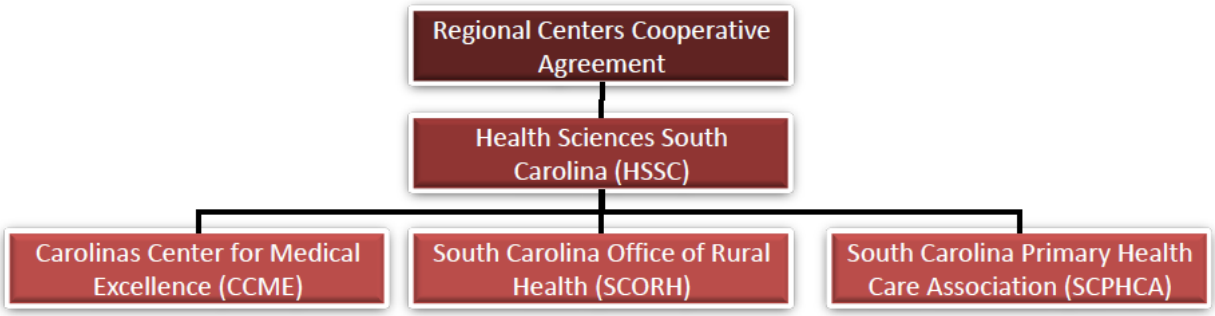
Administration for the HIE Cooperative Agreement grant team is now part of the SCDHHS Bureau of Federal Contracts and Grants Administration. The Bureau is responsible for developing and updating the HIE strategic and operational plans and continues to engage stakeholders in the planning process.

Under contract with SCDHHS, the South Carolina Department of Commerce has assisted with the development of a business sustainability plan, a required component of the operational plan. The South Carolina Department of Commerce developed an economic model to sustain SCHIEx through user fees after the grant funding period ends. Data from the detailed HIT environmental scan (see Provider EHR Adoption) was used as the variable for the economic model. The initial economic model was developed for providers and hospitals. Per feedback from the ONC, SCDHHS worked with the South Carolina Department of Commerce to adjust the economic model to include other subscribers, thus making SCHIEx available to additional users as well as reducing the subscription cost for each type of subscription entity. SCDHHS has coordinated several meetings with its Interim Governance Committee (IGC) that includes representation from hospital associations, provider associations, other state agencies, and other professional organizations. The revised final fee schedule was approved by the IGC in December 2010 and is posted electronically on the SCHIEx website. SCDHHS is coordinating the development of these deliverables with the State Medicaid HIT Plan (SMHP) to ensure a shared vision for future HIT activities in the State.

Meaningful use of EHRs is expected to improve health outcomes for all South Carolinians. At the close of the grant, South Carolina will have a statewide HIE and can contribute quantitative and evaluative data to the national dialogue on health information exchange.

Health Information Technology Extension Program: Regional Centers Cooperative Agreement Program

On April 6, 2010, HSSC received $5,581,407 for the Regional Centers Cooperative Agreement Program. With grant funding, HSSC and its partners established CITIA-SC. CITIA-SC assists priority primary care providers across South Carolina in improving the quality and value of health care through the selection, adoption, and meaningful use of EHR systems. Grant partners include the Carolinas Center for Medical Excellence (CCME), the South Carolina Office of Rural Health (SCORH), and the South Carolina Primary Health Care Association (SCPHCA).



Grant Objectives:

- CITIA will provide pre- and post-EHR adoption services.
- CITIA will develop a preferred vendor list.

Grant Outcomes:

- Priority primary care physicians will become users of certified EHRs and advance to become meaningful users
- CITIA-SC will identify ways to coordinate with related grants and HIT initiatives to ensure program coordination.

The CITIA-SC has deployed a two-tiered services model that will offer pre-EHR adoption services (practice assessment, system selection, implementation support) and post-EHR adoption services (post-implementation consultation on EHR system optimization, achieving meaningful use, connecting to the HIE). Of particular importance, a vendor selection and group purchasing committee was formed to identify available EHR software systems that are appropriate for a variety of practices. The committee evaluated vendor proposals and produced a recommended listing of EHR systems for practices to purchase through group purchasing contracts.

It is essential for this grant program to be coordinated with the EHR incentive Program as CITIA will often serve as the front line for questions and communication concerning the EHR Incentive Program. SCDHHS and CITIA have met regularly to discuss the programs and identified these points of collaboration:

- Both organizations will share their list of providers that have signed letters of commitment or registered for the incentive program. This will allow both organizations to conduct outreach efforts to providers for both programs.
- CITIA staff will assist providers with the volume requirement.
- CITIA staff will advise providers to organize documentation in the event of an audit.
- CITIA will share with SCDHHS which providers have reached the “go live” status, including certification information.

- CITIA will provide feedback on the EHR incentive Program.
- CITIA will solicit provider input on how to facilitate certified EHR adoption and share the results with SCDHHS.

Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases

In September 2010, SCDHEC received $310,000 from a CDC grant to improve its current state public health laboratory computer and information technology (IT) capabilities for transmitting reportable lab results to and from local, state, and national public health agencies and lab test results and test orders from and to hospital affiliated laboratories, medical providers, and their EHRs. Grant partners include the Bureau of Laboratories (BOL), the Bureau of Disease Control (BDC), and the Office of Public Health Statistics and Information Systems (PHSIS).

Grant Objective:

- SCDHEC will expand the current state public health laboratory computer and IT capabilities.

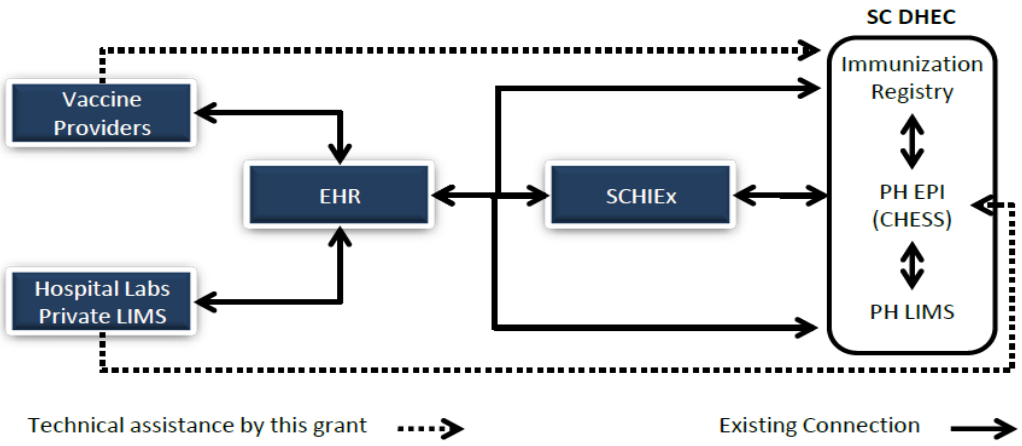
Grant Outcome:

- SCDHEC's developmental work will complete the needed infrastructure to enable providers to meet Stage 1 meaningful use requirements.

SCDHEC will complete, within the grant period, all the required activities and also expand the development to include infrastructure and interoperability with other existing systems to meet Stage 1 Meaningful Use requirements.

SCDHEC plays a key role in the state's HIE initiative by supporting the grant requirement for the Stage 1 Meaningful Use and also due to a critical need for exchanging timely ELRs with medical providers to perform their legally-mandated public health responsibility. This additional funding is being sought to further develop and implement the Sample Master Laboratory Information Management System (LIMS) capabilities to permit additional two-way lab data transmissions with medical providers, the public health agency, and the CDC. The additional funding will allow for sufficient resources to implement

overarching infrastructure and interoperability including the LIMS, immunization registry, and syndromic surveillance systems together to enhance SCDHEC's epidemiology and laboratory capacities as a whole. This enhanced capacity will allow information flow that interconnects medical providers' EHRs with the state public health labs and the public health programs for effective disease investigation, surveillance, and intervention. The figure below shows the planned infrastructure to support this initiative.

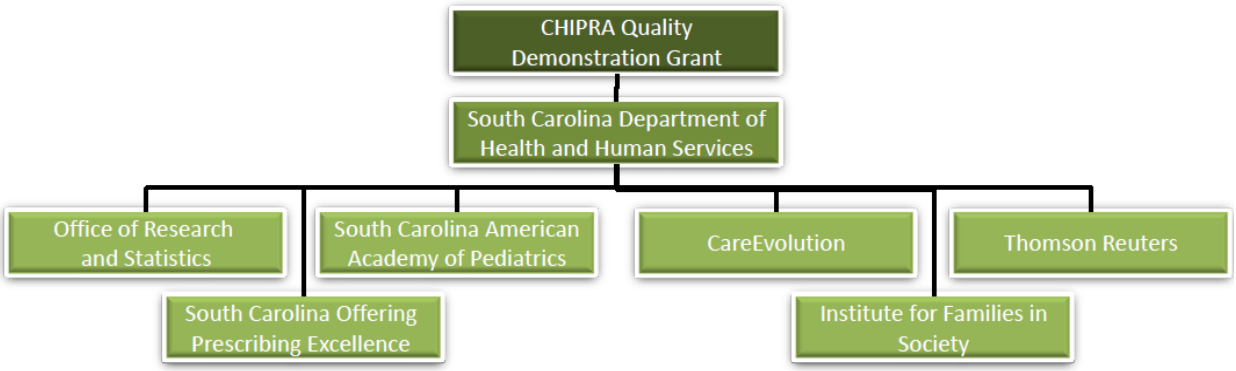


The SCDHEC BOL is a centralized state public health laboratory with statewide jurisdiction. South Carolina Law §44-29-10 and §17-5-560 require reporting of laboratory results (http://www.dhec.sc.gov/administration/library/CR-009036.pdf), conditions (http://www.scdhec.gov/administration/library/CR-009025.pdf), deaths and their causes from contagious or infectious diseases and or other terrorism to the SCDHEC, BDC, and the Office of Vital Record.

The overall focus of this grant is to successfully transmit two-way reportable lab results among the Bureau of Lab LIMS, the BDC Carolina Health Electronic Surveillance System (CHESS), the CDC, and other state public health labs and also to allow electronic sending and receiving of lab test orders and test results from the BOL LIMS by medical providers.

CHIPRA Quality Demonstration Grant Program

SCDHHS was awarded one of the 10 CHIPRA Quality Demonstration Grants on February 22, 2010 and received a grant award totaling $9,277,361. The grant program includes a nine-month planning phase to be completed in the first year prior to implementation of the proposed project. SCDHHS has named its demonstration project the Quality through Technology and Innovation in Pediatrics (QTIP) project. Grant partners include ORS, the South Carolina Chapter of the American Academy of Pediatrics (AAP), CareEvolution, Thomson Reuters, the South Carolina Offering Prescribing Excellence (SCORxE) program, and the Institute for Families in Society (IFS).



Grant Objectives:

- Providers will demonstrate the ability to collect the new CHIPRA measures using certified EHR technology and view quality reports prepared by Thomson Reuters.
- Providers will pursue National Committee for Quality Assurance (NCQA) certification of the patient-centered medical home (PCMH) model.
- Providers will identify quality improvement tactics that will impact their practices.

Grant Outcomes:

- SCDHHS will determine the impact of collecting CHIPRA measures and identify any barriers that impeded data collection.
- SCDHHS and its grant partners will create a clinical data repository and the necessary adapters that are capable of delivering quality report cards via SCHIEx to providers' EHRs.

SCDHHS maintains a positive relationship with the state chapter of the AAP, and as part of a grant funding request for the CHIPRA Quality Demonstration Grant Program, SCDHHS and its grant partners proposed to automate the collection of CHIPRA quality measures; to minimize the apparent overlap in different quality measures sets; and to create a provider friendly continuous closed-loop, quality improvement infrastructure

Using the existing SCHIEx infrastructure, participating providers will "connect" to each other to better deliver coordinated care using the PCMH model. Quality reports will be prepared in the Thomson Reuters Advantage Suite database and then returned to providers via SCHIEx for viewing in their EHR or the Application Service Provider (ASP) EMR module solution. The ASP EMR module will become certified as a module.

While the proposed demonstration project focuses on South Carolina's pediatric primary care practices, the lessons learned from this type of project would be valuable to the larger provider community.

The following report example is intended for use by a provider to easily assess quality measures related to individual patients. SCDHHS' vision is that such real-time feedback would alter practice patterns where there are opportunities for improvement in meeting accepted evidence-based best practices.

South Carolina Department of Health and Human Services
Provider Report: Medicaid Patient Level Metrics

Provider	**Provider 1234 Joan Smith, MD**
Time Period	**CY 2009**

Person ID	Gender	Recorded BMI	BMI Status	Chlamydia Screening	EPSDT Dental Visits	ER Visits per Patient	ER Status
153664601	Male	26.2	☹	n/a	✓	3	☹
155078802	Female	24.2	✓	✓	✓	2	✓
155881491	Female	27.1	☹	☹	✓	0	✓
156409502	Female	20.8	✓	✓	☹	1	✓
157265002	Male	21.2	✓	n/a	✓	2	✓
157270502	Female	23.7	☹	✓	☹	5	☹
158056201	Female	24.6	☹	✓	✓	4	☹

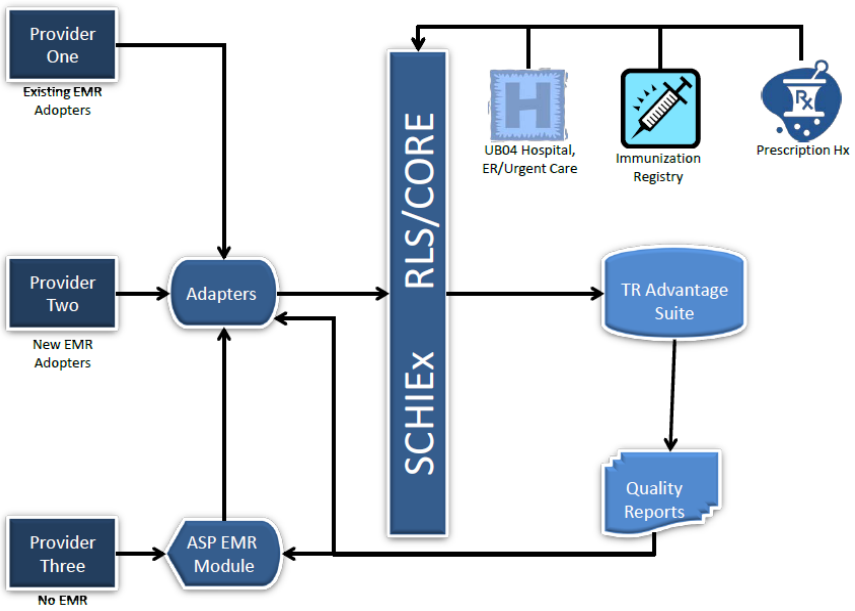
The report example below displays quality measures for the total patient population of a provider.

South Carolina Department of Health and Human Services
Medicaid Total Report: Provider Level Metrics

Subset	**SCHIP**
Time Period	**CY 2009**

Provider ID	Overall Status	BMI Recorded	BMI Status	Chlamydia Screening	Chlamydia Screening Status	EPSDT Dental Visits	Dental Status	ER Visits per 1,000	ER Status
353664603	☹	77%	☹	34%	✓	52%	✓	610	☹
355078802	✓	84%	✓	56%	☹	55%	✓	499	✓
355883493	☹	79%	☹	49%	☹	55%	✓	493	✓
356409502	✓	88%	✓	41%	✓	49%	☹	490	✓
357265002	✓	88%	✓	57%	✓	51%	✓	493	✓
357270502	☹	69%	☹	47%	☹	52%	✓	622	☹
358056203	☹	75%	☹	40%	✓	53%	✓	616	☹

The diagram below is a high-level articulation of the overall proposed technology infrastructure to support the grant project:



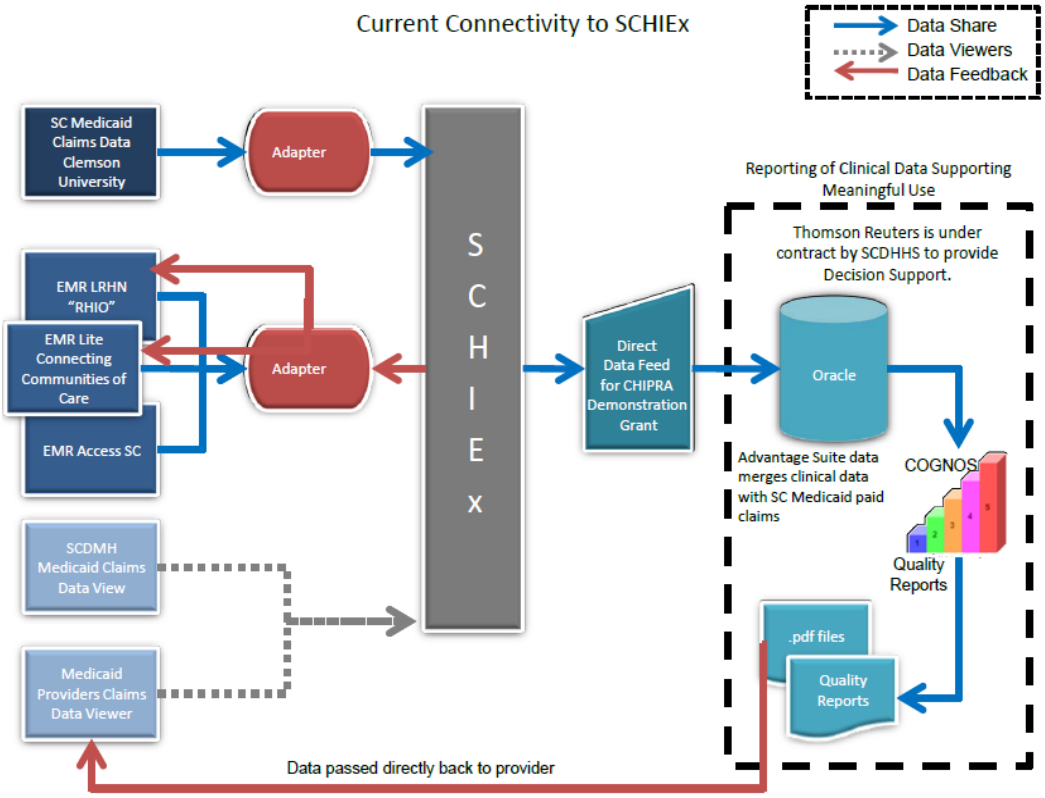
As the diagram indicates, edge adapters configured with existing provider EHRs (and new adopters) will extract the clinical documentation from the EHR, transform, standardize, and codify the resultant data per national standards, and transmit the data to SCHIEx. For providers without full-scale EHRs, an ASP EMR module (to be certified) will be provided to collect the necessary quality data for their patient population. The SCHIEx HIE backbone serves as a clearinghouse of information related to the patient. Emergency room visits, lab results, prescription histories, and immunization data are combined with data directly extracted from the provider's EMR. CareEvolution and Thomson Reuters will seamlessly integrate their efforts so that standardized data from edge adapters arrives in the Decision Support System (DSS) data warehouse, which generates the quality reports. The quality reports are delivered back to the providers as a "tab" on their ASP EMR module or via a web portal integrated with the EMR.

Clinical Data Repository

A quality reporting pilot project began in March 2010 to demonstrate the unification of clinical data from an EHR by means of SCHIEx into the Thomson Reuters Advantage Suite database with Medicaid claims data. The Carolina Health Centers, a member of the Lakelands Rural Health Network (LRHN), participated in this pilot with its existing connection to SCHIEx.

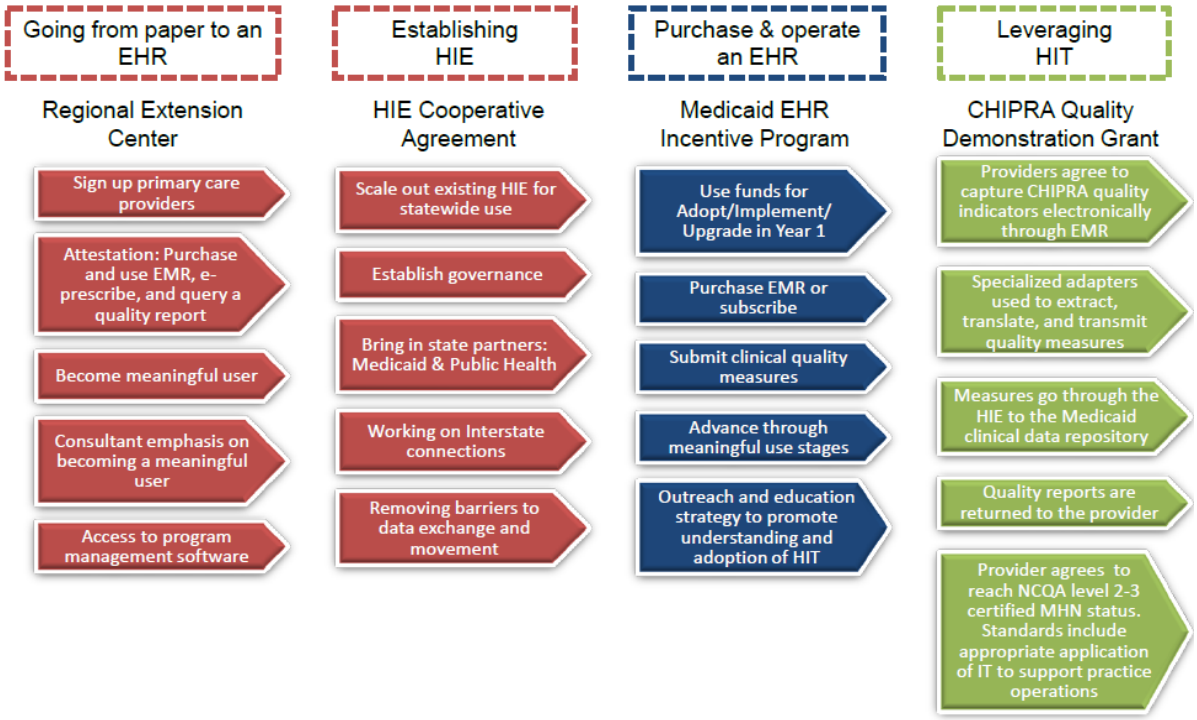
This pilot draws available raw data on Medicaid patients that are treated at the Carolina Health Centers through SCHIEx and into the Thomson Reuters Advantage Suite. From there, raw clinical data will be linked to the corresponding claims data, and meaningful use reports will be generated for SCDHHS. This pilot project is a significant first step for SCDHHS' preparation to accept quality measures and reporting through EHRs by 2012. Further, this pilot identified ways to lessen the administrative burden on providers to collect measures.

Efforts are now focused on how to integrate structured data into the claims repository in order to build a clinical data repository. Initial tests have been successful, and testing continues with the CHIPRA Quality Demonstration Project. The next steps involve working with the participating practices in mapping structured data with the Thomson Reuters Advantage Suite. The data stored in the participating practices' EHRs will be linked to the corresponding claims data. SCDHHS will then apply this methodology on a larger scale by 2012. In the mean time, SCDHHS will accept a standard format for quality data (format to be determined). The diagram below shows the current connectivity of SCHIEx for the SCHIEx pilot projects and the CHIPRA Quality Demonstration Grant**.**



Grants Coordination and Delineation

South Carolina state agencies and organizations are committed to coordinating all grant activities throughout the state, ensuring that each grant pursues unique objectives that will support the collective goal of certified EHR adoption and meeting meaningful use. The major theme and high level objectives of each funding opportunity are distinct and require each program to operate efficiently in order to support the overall HIT initiative in the state:



Expansion of the statewide HIE infrastructure project, SCHIEx, is being funded in part by the ONC through the HIE Cooperative Agreement. The HIE Cooperative Agreement will ensure that SCHIEx provides an HIE "dial tone" for providers to exchange data with each other and with other data sources across the state.

Eligible professionals (EPs) and eligible hospitals (EHs) are able to pursue ARRA incentive payments for adopting certified EHR technology and becoming meaningful users. SCDHHS will leverage the Regional Extension Center's regular grant-funded activities to help those providers who do not currently have or use an EHR to successfully select and adopt certified EHRs for their offices. Qualifying South Carolina providers will receive free services from the Regional Extension Center for up to one year if they signed up to receive services prior to April 6, 2011. Since April 6, 2011, the Regional Extension Center is working with providers to negotiate a rate for services. ARRA incentive payments and the Regional Extension Centers initiatives will provide the necessary resources to help clinicians' offices become basic, but successful, adopters and meaningful users of EHRs.

The CHIPRA Quality Demonstration Project will assist providers to lessen the administrative burden for collecting additional quality measures. The grant supports the NCQA PCMH status. These standards include best practices for applying HIT, including certified EHR technology, in a provider practice.

The Medicare and Medicaid EHR Incentive Programs will provide financial incentives to providers to adopt, upgrade, or implement certified EHR technology. Providers will also be compensated as they advance through meaningful use stages and continue to meet the requirements of the programs.

South Carolina is also taking a collaborative approach in grant administration by leveraging grant reporting. SCDHHS hosts regular grant administration meetings to provide updates on grant activities and identify points of collaboration. SCDHHS values this collaboration as these programs are dependent on each other and the success of SCHIEx in order to operate effectively.

SCHIEx

State Data Warehouse

In 1992, South Carolina established a state data warehouse in ORS. A proviso requires that all state agencies submit data to the warehouse for use in program evaluation and outcomes analysis. Each agency maintains control over its own data.

In 1996, state law mandated that all inpatient, emergency department, and outpatient claims meeting certain criteria must be submitted to the ORS with patient and provider identifiers. The South Carolina Data Oversight Council, a multi-stakeholder public authority, oversees the principles and protocols for the release of these data. This model provides a strong precedent for SCHIEx and its governance.

SCHIEx Development

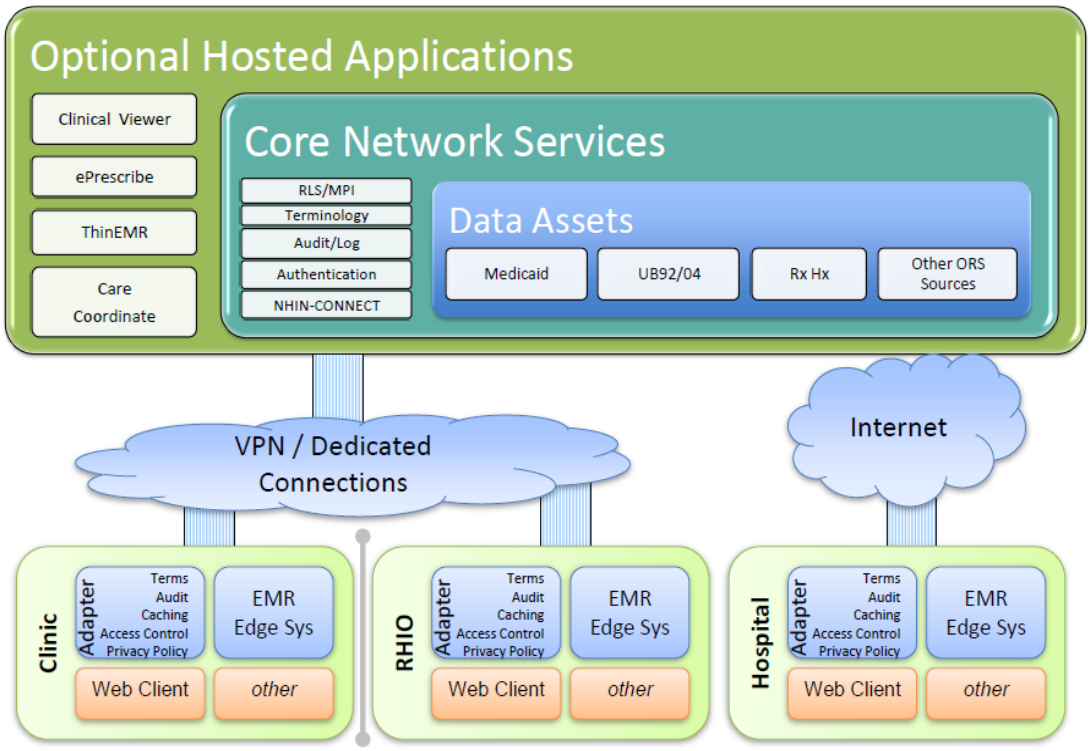
In 2006, ORS partnered with CareEvolution, a private provider of secure HIE solutions, in the development of a production-level Master Patient Index (MPI) and Record Locator Service (RLS). CareEvolution donated the software supporting the MPI, which is at the heart of integrating the different physical records found in the various systems into one logical view of the patient. Development of the RLS/MPI was completed in 2007, creating an index and record location solution containing health information on over 4 million individuals. (This number includes both in- and out-of-state persons due to mobility and a 10-year time span.)

SCHIEx features include: federated and hosted clinical data; extensive access controls and auditing based on the “need to know”; and reporting tools for care management and coordination.

The SCHIEx architecture centers on the standards-based federated exchange of clinical information among providers that use EMRs. This federated service oriented architecture (SOA) is coordinated by a state-level RLS/MPI and is enhanced by a 10-year claims history that currently uses both Medicaid and hospital billing data (UB92/UB04).

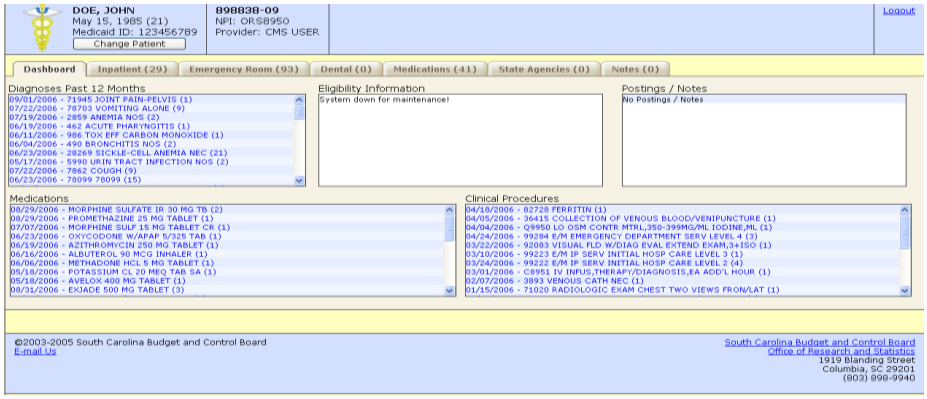
The Block Diagram below is a high-level view of the SCHIEx design; an SOA technology stack that provides comprehensive but modular tools to deploy and operate an HIE. Core services are the RLS/MPI, terminology, audit/log, authentication, and Nationwide Health Information Network (NHIN) CONNECT. Optional services that will be certified modules are the clinical viewer, an ePrescribe module, the ASP EMR module, and care coordination. SCHIEx layers can be implemented in hybrid

(federated/centralized) deployment models to best meet the specific needs to rationalize patient identity, create a unified patient health record, and deliver multiple "views" (consumer, provider, researcher) of the resulting interoperable data.

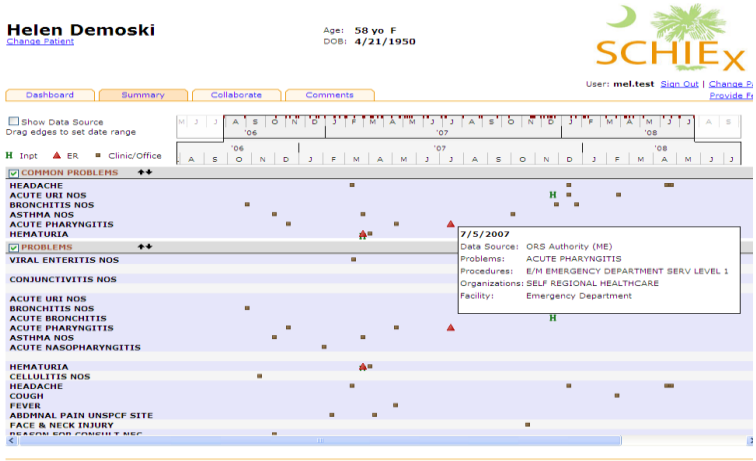


Pilot projects of SCHIEx include:

- **South Carolina Medicaid EHR (formerly known as EPHR):** The 2007 EPHR Pilot Project included five practices in five counties. The primary objective of the project was to place claims data in the hands of providers in order that they could make the best decisions concerning patient care. ORS developed a clinical interface to display 12 months of Medicaid paid claims data. The EPHR dashboard view included diagnoses, eligibility information, medications, and clinical procedures. Notification letters and notices of privacy practices were mailed to Medicaid beneficiaries in the affected counties. Participating providers were responsible for obtaining opt-in consent from beneficiaries, which was a barrier to obtaining a high level of participation. Launched in July 2009, SCHIEx used an opt-out beneficiary consent model to increase participation. At the close of the pilot, a survey of the participating providers showed a positive impact on patient care as patients may not fully disclose medical treatments received. This pc-based pilot project was a useful testing ground and precursor for the state's HIT development as ORS and its stakeholders developed the web-based HIE known as SCHIEx. Below is a screenshot of the EPHR dashboard viewer.



In 2008, the EPHR project transitioned to a web-based EHR viewer, and authorized Medicaid providers can view a 10 year Medicaid claims history through SCHIEx and access claims-based information on any of the state's nearly 900,000 beneficiaries. From claims data, health information is available on diagnoses, prescriptions, procedures, etc., enabling a provider to access the health record of a patient. Beneficiaries were notified of the opt-out policy via beneficiary newsletters sent every quarter. New beneficiaries were notified of the opt-out policy in the card carrier containing their Medicaid cards. In order to opt out, beneficiaries must call the SCDHHS Resource center. Resource center staff log into the SCHIEx site and input the opt-out request. As of June 2010, 330 beneficiaries have opted out. Future plans include adding clinical decision support features and making cosmetic changes to the viewer. Below is a screenshot of a sample patient's record. (See following page.)



- **Lakelands Rural Health Network (LRHN):** In July 2007, through a HRSA grant, SCHIEx core services were leveraged to provide connectivity for the LRHN. The LRHN was granted access to Medicaid claims data. The LRHN is a Regional Health Information Organization (RHIO) that includes one regional hospital; three rural hospitals, two of which are critical access hospitals

(CAHs); and over 20 primary care providers covering a six-county area in northwestern South Carolina. The LRHN has submitted an application for the Beacon Community grant.

- **Connecting the Communities of Care:** In 2008, community health centers, free medical clinics and rural health clinics (RHCs) began connecting to SCHIEx as both data consumers and data providers. The Blue Cross Blue Shield Foundation of South Carolina funds this project, called "Connecting the Communities of Care" (CCC). The project provides for data exchange for a minimum of 30 sites per year over a three-year period. Data from this project are already fueling valuable research. For example, a recent study provided empirical evidence that use of a medical home (in this case, visits to free clinics connected to SCHIEx) significantly reduced patients' inappropriate use of the emergency room.
- **AccessHealth SC:** Funded by The Duke Endowment, the AccessHealth SC program includes hospitals, medical providers, and behavioral health providers. The program seeks to improve access to healthcare services for South Carolina's low-income uninsured population and has announced the selection of three communities that will receive technical assistance and support to establish local, coordinated networks of care for the low-income uninsured population. On June 15, 2009, three community based networks were selected: Kershaw County, Spartanburg County, and the LRHN. Technical discussions are underway to develop a SCHIEx deployment plan for the networks, as well as to enhance SCHIEx with a robust care coordination component that focuses on selected chronic diseases (most notably diabetes and congestive heart failure).
- **SCDMH Telepsychiatry:** SCHIEx also supports a South Carolina Department of Mental Health (SCDMH) sponsored telepsychiatry initiative that provides 24/7 behavioral health consulting services to hospital emergency departments statewide. As of June 8, 2009, the SCDMH had deployed six telepsychiatry video units with a plan to install up to another 59 over the next two years. Future plans include the real-time integration of the SCDMH EMR.

SCHIEx Funding

Prior to the HIE Cooperative Agreement award, nearly $6 million was spent to develop HIE capacity in South Carolina. These expenditures represent state and private funds as well as a significant gift to the state:

CareEvolution-RHIO HEADSTART gift value	$1,945,000
SCHIEx-Medicaid (formerly EPHR) FY 2006-2010	$1,221,526
Connecting the Communities of Care (BCBS Foundation of SC)	$851,000
AccessHealth SC (The Duke Endowment)	$160,000
Lakelands Connect (HRSA-Flex)	$1,500,000
Rural Healthcare Quality Initiative (HSSC grant)	$225,000
Total HIE Expenditures	**$5,902,526**

Additional funding to support SCHIEx is provided through the HIE Cooperative Agreement awarded to SCDHHS. At the conclusion of grant funding, user subscription fees will sustain the SCHIEx operation.

Nationwide Health Information Network (NwHIN) Connection

SCHIEx Core Services will be connected to NwHIN via CONNECT 2.3. This functionality is built in test mode. As of June 2009 it was possible to manually send test messages. Connecting to the NwHIN is a 2011 initiative. SCHIEx has plans to develop linkages to Federal agencies such as the Social Security Administration (SSA), Department of Defense (DoD), and Veteran's Administration (VA). SCHIEx is following federally mandated open standards.

In early 2011, SCHIEx received approval for its application and official request for the on boarding of SCHIEx to the NwHIN. SCHIEx expects to be in production mode by summer 2011 and is currently undergoing technical validation.

The United States Department of Veterans Affairs through the Virtual Lifetime Electronic Record (VLER) project has agreed to act as the federal sponsor in the NwHIN onboarding process. If approved by the NHIN Coordinating Council, SCHIEx will serve as a Veteran's Administration-sponsored production pilot in South Carolina facilitating the exchange of clinical data amongst pilot participants. SCHIEx is fully compliant with the updated HIPAA Privacy and Security requirements promulgated in February 2009.

Governance

Governance Model

South Carolina developed its governance based on the Government-Led Electronic HIE model put forth by the National Governor's Association in the report *Public Governance Models for a Sustainable Health Information Exchange Industry* and contained in the report *Preparing to Implement HITECH: A State Guide for Electronic Health Information Exchange*. Given the limited existing private sector HIE efforts underway; the demographics of a small, largely rural state; and the state's interest in the outcomes to be gained by promoting statewide electronic HIE, a government-led HIE was the logical choice of approach. This approach is further supported by the fact that South Carolina already possesses the technical architecture to support and operate a statewide HIE and currently operates a limited Medicaid HIE on a statewide basis (SCHIEx).

Interim Governance Committee (IGC)

SCHIEx is governed by the IGC. The IGC was established by Governor Mark Sanford in Executive Order 2009-15 on October 16, 2009 to recommend strategies and policies to successfully implement and sustain a statewide HIE in South Carolina (see Appendix A).

The IGC is a joint public and private entity made up of 11 members from various stakeholder groups, including executive officers and directors, or designees, from provider organizations, non-profit research institutions, and state agencies as well as consumer representation.

Letters of appointment, on behalf of SCDHHS and ORS, were sent to public and private stakeholders who have coalesced behind the creation of a statewide HIE and represent interests throughout the state. The 11-member committee, with stakeholder representation of approximately 60% public and 40% private stakeholders, includes the following representatives:

- President, South Carolina Hospital Association (SCHA)
- Chief Executive Officer, South Carolina Office of Rural Health (SCORH)
- President, South Carolina Medical Association (SCMA)
- Chief Executive Officer, South Carolina Primary Health Care Association (SCPHCA)
- President, South Carolina Pharmacy Association (SCPhA)
- Director, South Carolina Department of Health and Human Services (SCDHHS)
- Director, State Budget and Control Board Office of Research and Statistics (ORS)
- Commissioner, South Carolina Department of Health and Environmental Control (SCDHEC)
- Chairman of the Board, Lakelands Rural Health Network (LRHN)
- President and Chief Executive Office, Health Sciences South Carolina (HSSC)
- A consumer

The IGC, in cooperation with the HIT Summit stakeholders, selected SCHIEx to be the state's HIE. SCHIEx was developed by ORS and CareEvolution. The Director of ORS is a member of the IGC. Under the terms of the agreement between ORS and SCDHHS, ORS will continue to operate, house, and staff SCHIEx. However, ORS will perform these tasks under the governance of the IGC, or SCHIEx's future permanent governing body once the South Carolina Legislature passes enabling legislation.

The inaugural meeting was held on November 16, 2009. The IGC follows a monthly schedule for meetings.

Accordingly, the IGC, as the SCHIEx governing body, is charged with performing the following specific tasks required for implementation of South Carolina's HIE:

- Identify and harmonize the federal and state legal and policy requirements that enable appropriate health information exchange services.
- Establish a statewide policy framework that allows incremental development of HIE policies over time, enables appropriate, inter-organizational health information exchange, and meets other important state policy requirements such as those related to public health and vulnerable populations.
- Implement enforcement mechanisms that ensure those implementing and maintaining HIE services have appropriate safeguards in place and adhere to legal and policy requirements that protect health information, thus engendering trust among HIE participants.
- Minimize obstacles in data sharing agreements.
- Ensure policies and legal agreements needed to guide technical services prioritized by the state are implemented and evaluated as a part of annual program evaluation.
- Establish a governance structure that achieves broad-based stakeholder collaboration with transparency, buy-in, and trust.
- Set goals, objectives, and performance measures for the exchange of health information that reflect consensus among the health care stakeholder groups and that accomplish statewide coverage of all providers for HIE requirements related to meaningful use criteria to be established by the Secretary through the rulemaking process.
- Ensure the coordination, integration, and alignment of efforts with Medicaid and public health programs through efforts of the State Health IT Coordinators.
- Establish mechanisms to provide oversight and accountability of HIE to protect the public interest.
- Account for the flexibility needed to align with emerging nationwide HIE governance that will be specified in future program guidance.

The IGC will perform these tasks through monthly meetings of the IGC and its subcommittees, through contracts between its state agency partners including ORS, and contracts with third-party contractors.

In its initial monthly meetings, the IGC focused on convening the state's healthcare stakeholders to build trust and consensus regarding the development of South Carolina's HIE. Each member of the IGC continues to engage his or her representative industry group to enhance knowledge of the HIE and to build support for the initiative. Since January 2010, however, the IGC has established subcommittees and increased its focus on four specific tasks:

1. Develop appropriate standards for SCHIEx's privacy, security, and interoperability that align with state and federal standards;

2. Establish mechanisms to provide oversight and accountability to SCHIEx and its participants;

3. Advise and assist with the development of proposed enabling legislation to create a permanent governing body for SCHIEx; and

4. Explore ways to enhance the technical architecture and framework of SCHIEx to promote meaningful use of EHRs by providers in South Carolina.

The Policy and Privacy Subcommittee has developed Policies and Procedures that set forth the privacy, security, and accountability standards for SCHIEx. Draft versions of the policy and legal documents were open for a public comment period that closed in October 2010. During the public comment period, the draft documents were available through the SCHIEx website (www.schiex.org) and the SCDHHS HIT website (www.scdhhs.gov/hit). A dedicated email address was established to receive comments submitted, and a summary of the comments and corresponding responses was compiled and posted on the SCHIEx and SCDHHS HIT websites. During the December 2010 IGC meeting, the following documents were unanimously approved by the IGC and have since been made available at www.schiex.org/documents.php:

- SCHIEx Participation Agreement
- SCHIEx Business Associate Agreement
- SCHIEx Policy Manual:
    - Governance and Organization
    - Policies and Procedures
    - Interoperability Services Guide
    - Subscription Fee Schedule
- SCHIEx Responsiveness Summary to Public Comments

Finally, although the IGC's proposed SCHIEx legislation has not yet passed (as discussed below), the two measures needed to authorize the electronic transfer of patient records and lab data in South Carolina did pass the legislature.

The IGC proposed legislation through a sponsor during the 2009-2010 South Carolina legislative session that would have established a permanent governance body with rule making authority. However, because the 2009-2010 legislative session was a short session, the South Carolina Senate failed to pass the proposed SCHIEx legislation before the end of the session, although the South Carolina House did pass a version of the bill. Under the Executive Order, the IGC has the responsibility and authority to govern the SCHIEx program with the cooperation of its state agency partners until permanent legislation is passed. Nonetheless, the IGC established a Legislative Subcommittee to re-draft and propose permanent legislation and build support among the various healthcare stakeholders in South Carolina. SCHIEx permanent governance legislation was introduced on January 25, 2011 into the SC House of

Representatives. However, the legislation did not pass during the 2011 session. In the mean time, Proviso 89.120 (see Appendix B) that helps resolve some of the immediate barriers for EHR adoption and HIE was approved. The proviso addresses issues related to laboratory results and record movement:

> **89.120.** (GP: Information Technology for Health Care) From the funds appropriated and awarded to the SC Department of Health and Human Services for the Health Information Technology for Economic and Clinical Health Act of 2009, the department shall advance the use of health information technology and health information exchange to improve quality and efficiency of health care and to decrease the costs of health care. In order to facilitate the qualification of Medicare and/or Medicaid eligible professionals and hospitals for incentive payments for meaningful health information technology (HIT) use, a health care organization participating in the South Carolina Health Information Exchange (SCHIEx) or a Regional Health Information Organization (RHIO) or a hospital system health information exchange (HIE) that participates in SCHIEx may release patient records and medical information, including the results of any laboratory or other tests ordered or requested by an authorized health care provider within the scope of his or her license or practice act, to another health information organization that requests the information via a HIE for treatment purposes with or without express written consent or authorization from the patient. A health information organization that receives or views this information from a patient's electronic health record or incorporates this information into the health information organization's electronic medical record for the patient in providing treatment is considered an authorized person for purposes of 42 C.F.R. 493.2 and the Clinical Laboratory Improvement Amendments.

The IGC will continue to operate under the executive order. The IGC also established a committee in May 2011 to investigate a possible transition to a non-profit governance model. The IGC is engaging stakeholders as it considers this transition and conducts research.

Finally, SCHIEx was made available for onboarding beginning in January 2011 in part due to the work of the Technical Subcommittee. South Carolina is fortunate to have an existing HIE that has successfully implemented several pilot projects across the state. The Technical Subcommittee, along with the ORS which developed the SCHIEx platform and operates the HIE, has made significant progress in adopting the enhancements that will enable participants to meaningfully use and exchange electronic health records in time to receive payments through the EHR Incentive Program. These enhancements include enabling participants to exchange lab data as well as submit and receive immunization data from the state's immunization registry at SCDHEC.

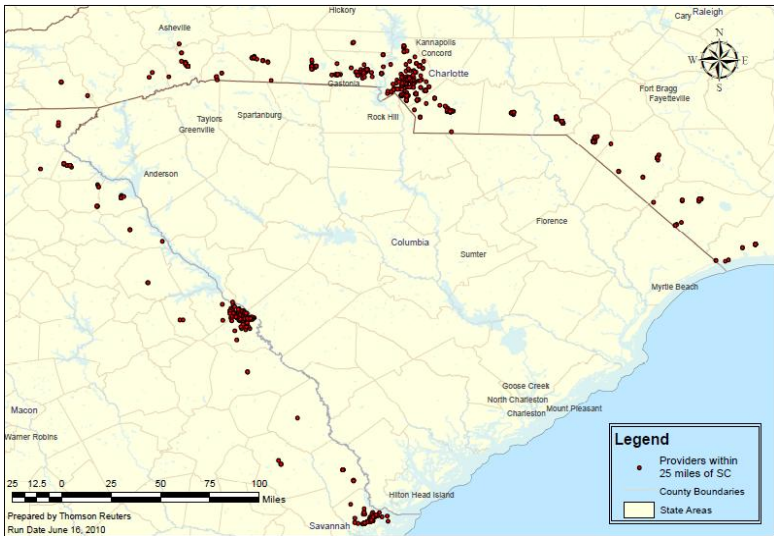
In addition to the foregoing subcommittees, the IGC has established an Operations Subcommittee to liaise with ORS staff and to develop the infrastructure – website, telephone help lines, sustainability plans, and office space – needed to operate a statewide HIE.

Presentations to the IGC and meeting minutes are available at http://www.schiex.org/meetings.php. Other information and updates (including policies and public notices) concerning the IGC are available at http://www.schiex.org/governance.php.

Interstate Activities

During the HIE Leadership Forum in May 2010, South Carolina met with representatives from North Carolina and Tennessee in order to address interstate issues. South Carolina is also interested in working with Georgia to resolve interstate issues, but due to Georgia's extended planning period, discussions between the two states have been deferred at present.

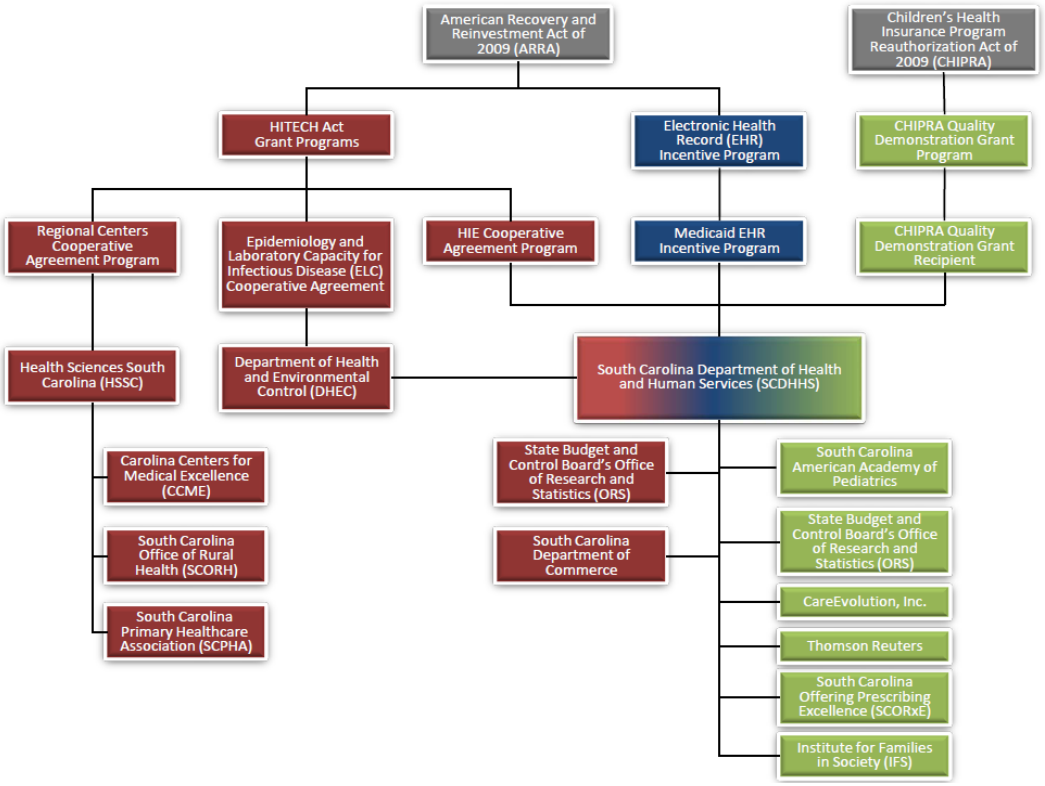
The next steps for South Carolina include establishing a workgroup with North Carolina and Tennessee and then developing an agenda to address interstate issues. The Charlotte, North Carolina and Rock Hill, South Carolina area share a good deal of clinical resources, indicating the importance in collaborating to resolve any interstate issues. The map below identifies providers that border South Carolina and most likely serve Medicaid populations for two states.



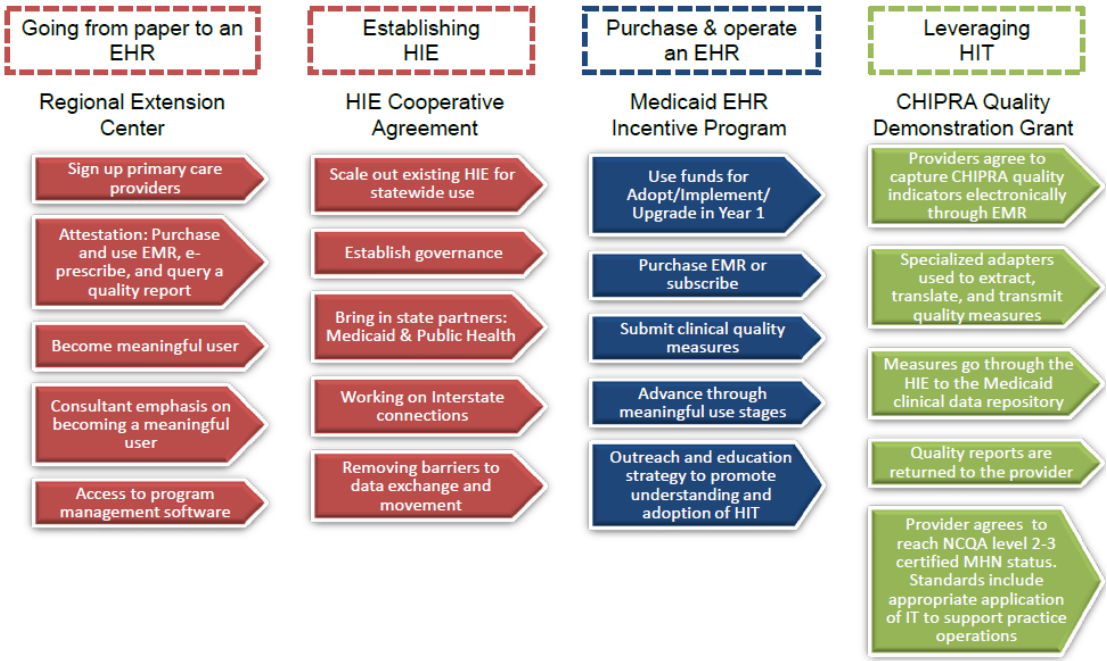
Strategy to Meet Meaningful Use

Expanding the grant network, integration of the grants, and leveraging the unique aspects of the grants put the infrastructure in place for all providers to meeting Stage 1 meaningful use. The Medicaid agency, the HIE Cooperative Grant Coordinators, the State HIT Coordinator, the Regional Extension Center Coordinator, the Public Health Agency, and the South Carolina Chapter of the AAP are working collaboratively towards the goal of achieving HIT adoption, including certified EHR technology, and meaningful use.

The grants integrate in this manner:



The key theme and high level objectives of each funding opportunity are distinct and require each program to operate efficiently in order to support the overall HIT initiative in the state:



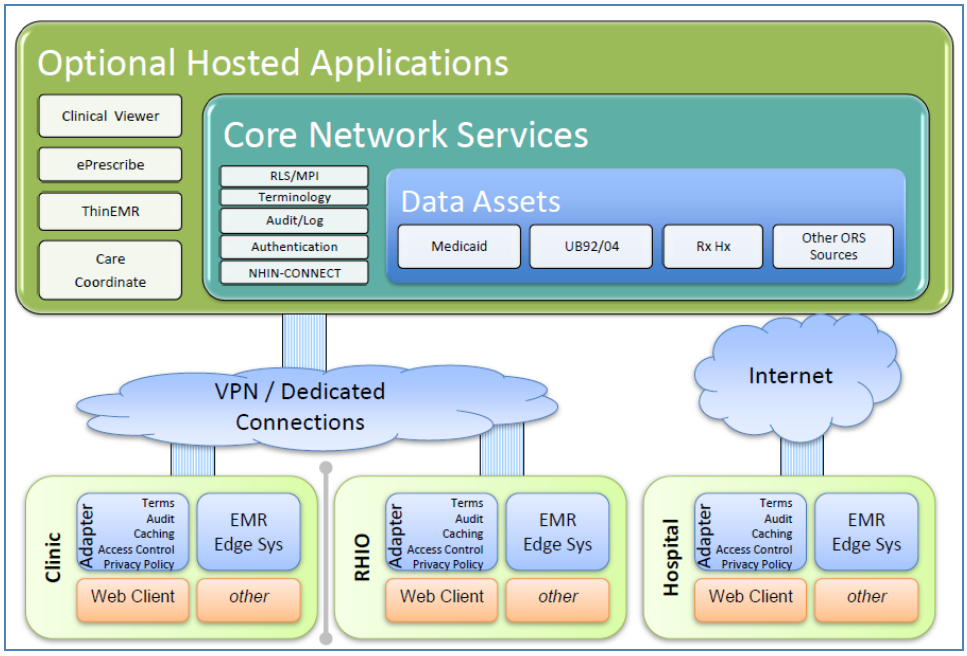
SCHIEx – Sharing Patient Summaries across Unaffiliated Organizations

In 2006, ORS partnered with CareEvolution, a private provider of secure HIE solutions, in the development of a production-level MPI and RLS. CareEvolution donated the software supporting the MPI, which is at the heart of integrating the different physical records found in the various systems into one logical view of the patient. Development of the RLS/MPI was completed in 2007, creating an index and record location solution containing health information on over 4 million individuals. (This number includes both in- and out-of-state persons due to mobility and a 10-year time span.)

SCHIEx features include: federated and hosted clinical data; extensive access controls and auditing based on the "need to know"; and reporting tools for care management and coordination.

The SCHIEx architecture centers on the standards-based federated exchange of clinical information among providers that use EMRs. This federated service oriented architecture is coordinated by a state-level RLS/MPI and is enhanced by a 10-year claims history that currently uses both Medicaid and hospital billing data (UB92/UB04).

The Block Diagram below is a high-level view of the SCHIEx design; a service-oriented architecture (SOA) technology stack that provides comprehensive but modular tools to deploy and operate an HIE. Core services are the RLS/MPI, terminology, audit/log, authentication, and NwHIN CONNECT. Optional services are the clinical viewer, an ePrescribe module, the ASP EMR module, and care coordination. SCHIEx layers can be implemented in hybrid (federated/centralized) deployment models to best meet the specific needs to rationalize patient identity, create a unified patient health record, and deliver multiple "views" (consumer, provider researcher) of the resulting interoperable data.



Standards to Meet Meaningful Use Standards

The table below lists the appropriate data sharing communications procedures that are also relevant to meaningful use. Results from the IHE testing are available at the HIE Website under CareEvolution. At the IHE 2010 Connectathon, the underlying technology platform for SCHIEx (HIEBus) successfully passed all 70 tests to be able to offer out-of-the-box connectivity that uses PIX/PDQ and XDS profiles to edge EMR systems.

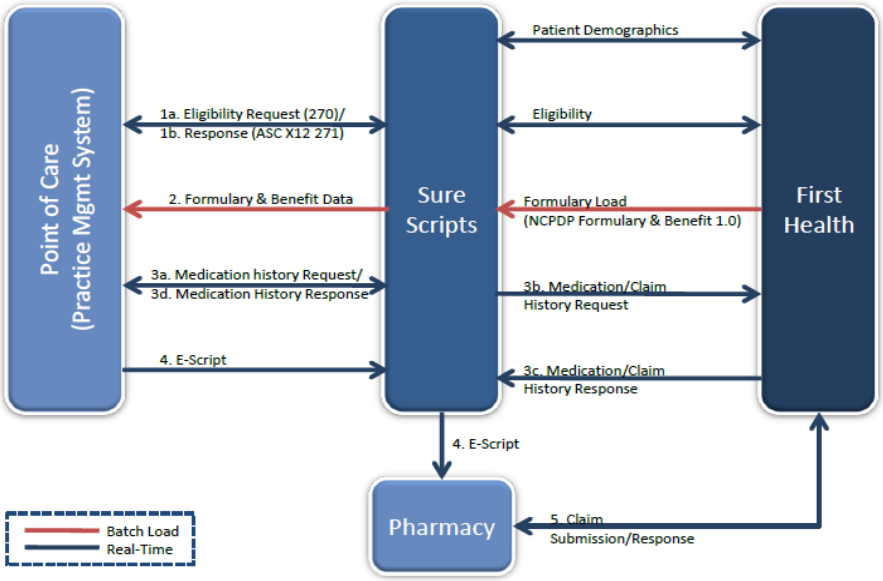
Data Exchanged	Standard Used
Continuity of Care Document (CCD)	OASIS ebXML compliant RIMv3.0, RSv3.0, Queryv3.0, LCMv3.0, CMSv3.0 (HL7 V3 CDA R2 as specified in HITSP/C32 + HITSP/C83, /C80)
Continuity of Care Record (CCR)	OASIS ebXML compliant RIMv3.0, RSv3.0, Queryv3.0, LCMv3.0, CMSv3.0 (HL7 V3 CDA R2 as specified in HITSP/C32 + HITSP/C83, /C80)
Other clinical summaries	HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, TIF. IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Clinical patient notes	HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, and TIF. IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Consultations and Referrals	HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, and TIF. IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Dictation Notes	HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, TIF. IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Lab	HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, TIF. IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Radiology	RESULTS: HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, and TIF. IMAGES: We provide desktop integration with GE and Phillips PACS iSiteviewers.
Cardiology	RESULTS: HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, and TIF. IMAGES: We provide desktop integration with GE and Phillips PACS iSiteviewers.

Data Exchanged	Standard Used
Other ancillary results	I RESULTS: HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, and TIF.
Digital chart information	RESULTS: HL7 2.3, 2.4, 2.5, 2.5.1, 2.6. HL7 3.0. Custom interfaces to manage RTF, PDF, JPG, TIF.
e-Rx	SureScripts Certified Solutions Provider for ePrescribe. (v4.2)
Medication history	SureScripts Certified Solutions Provider—Prescription Benefits Also managed with CCD/CCR as described above.
PBM/formulary integration	SureScripts Certified Solutions Provider – Prescription Benefits
Patient messaging/alerts	Custom/ proprietary
PHR integration	Microsoft Healthvault Certification
Home-based monitoring integration	Database integration with Horizon Homecare v10.2.x
Reporting/receiving immunization data	HL7 2.x. HL7 3.0 CDA (per HITSP C78)
Provider alerts to and from public health	Custom/ proprietary. HL7 2.5.1.
Other population health reporting/exchange	IHE 2010 certification Profiles: PIXv2 and PIXv3 consumer, source, x-ref manager (IHE); XDS.b consumer, source, repository, registry (IHE & HITSP); ATNA (IHE & HITSP); Secure Node (IHE & HITSP)
Disease management reporting/exchange	Custom/ proprietary. HL7 2.3.

Medicaid ePrescribing Initiative

First Health (Magellan Health Services) is under contract with SCDHHS to manage pharmacy point of sale claims and electronic eligibility checks. The Medicaid Management Information System (MMIS) processes these claims. South Carolina is one of seven states that have a connection with their prescription history to SureScripts. SureScripts is the software used by practice management systems in physicians' office when a script for a Medicaid patient is entered. The practice management systems contract with SureScripts for ePrescribing. SureScripts is the intermediary between the providers' practice management software and First Health. SureScripts checks the eligibility, the formulary, and the medication history of the patient with First Health before the Pharmacy fills the script. First Health processes the claim and pays SureScripts transaction fees with the dollars paid by SCDHHS based upon the SCDHHS contract with First Health.

The diagram below depicts the ePrescribing transaction workflow and shows how the Medicaid provider achieves the meaningful use criteria for the ePrescribing requirement. This is an example of an integrated approach used to engage existing SCDHHS contractors to implement the EHR incentive program. A by-product of this integrated effort is evident in the increased reporting capabilities since SureScripts can provide reports showing EPs' use of ePrescribing.



SCHIEx is also making available a SureScripts certified ePrescribe application to enable any interested provider in the state to be able to "write" electronic prescriptions. This application will become a certified module so that providers may use it to quality for EHR incentives.

The table below shows the steady increase of ePrescribing utilization for South Carolina:

Year	% Physicians Routing Prescriptions Electronically	% Patients with Available Prescription Benefit/History Information	% Community Pharmacies ePrescribing Activated
2007	1%	55%	66%
2008	7%	61%	79%
2009	8%	61%	92%

Further, the monthly volume of Medicaid ePrescribing utilization is increasing:

Month	% of Medicaid ePrescriptions
January 2010	1.8%
February 2010	2.2%
March 2010	2.5%
April 2010	3.2%
May 2010	4.5%
June 2010	5.1%

Immunization Registry Exchange via SCHIEx

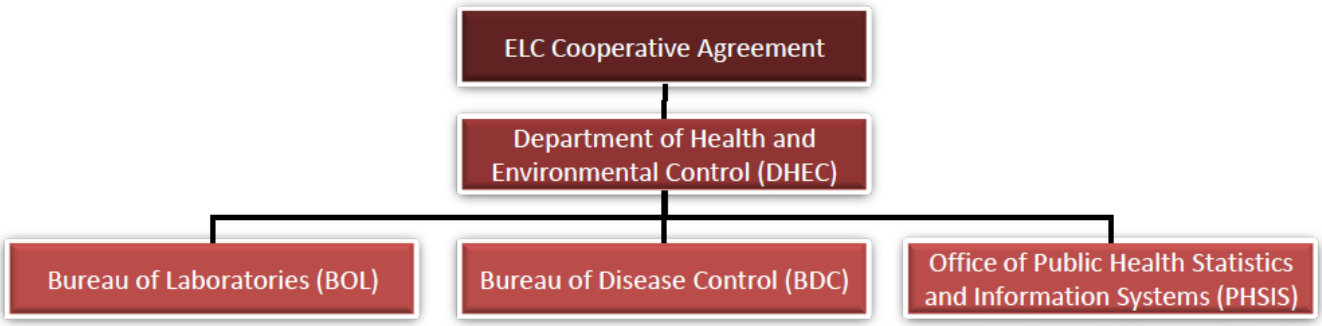
Other state entities including ORS and SCDHEC have completed technical work to connect SCDHEC's disease and immunization registries to SCHIEx. Establishing a connection was an early priority as it fulfills SCHIEx's support of the meaningful use requirement for immunizations. Recently, Medicaid implemented a new requirement for Medicaid claims to include CPT codes, which includes immunization data. Medicaid sends a data feed to ORS, which sends it to SCDHEC to populate the immunization registry and increase its data stores. ORS will enhance SCHIEx further to include clinical components and care coordination features.

SCDHEC's collaboration with SCHIEx core infrastructure pertains to the interoperability for bi-directional exchange of immunization records, which is an ARRA related initiative and fundamental to achieving meaningful use. The project to connect the SCDHEC immunization registry i.e., CARES and the IIS to SCHIEx included connecting the IIS to multiple EMRs via an adapter to SCHIEx. ORS provided the adapter to SCDHEC. This adapter sits in front of the current HL-7 infrastructure at SCDHEC and acts as a universal translator for EMRs who are also participating in SCHIEx. SCDHEC also currently offers the ability to connect directly to the EMR for those that are not connected to SCHIEx. ORS and SCDHEC also are completing technical work in order that immunization certificates may be printed by providers across the state.

The immunization registry consists of CARES, the history and analytics repository for the registry, and the IIS, the SCDHEC HL-7 Enabled IIS providing the messaging infrastructure. The IIS meets the requirements of the CDC Implementation Guide for Immunization Data Transactions, Version 2.2. It is capable of processing the standard transactions of VXQ, VXR, VXX, and VXU.

Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity (ELC) for Infectious Diseases

In September 2010, SCDHEC received $310,000 from a CDC grant to improve its current state public health laboratory computer and IT capabilities for transmitting reportable lab results to and from local, state, and national public health agencies and lab test results and test orders from and to hospital affiliated laboratories, medical providers, and their EHRs. Grant partners include the BOL, the BDC, and the PHSIS.



Grant Objective:

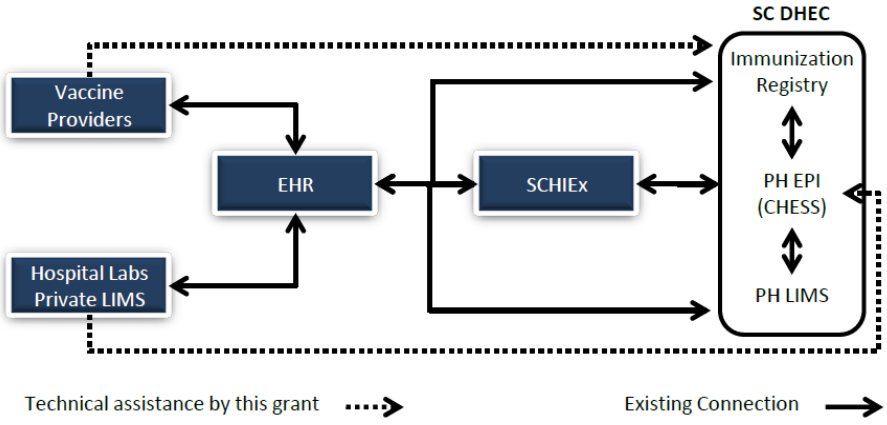
- SCDHEC will expand the current state public health laboratory computer and IT capabilities.

Grant Outcome:

- SCDHEC's developmental work will complete the needed infrastructure to enable providers to meet Stage 1 meaningful use requirements.

SCDHEC will complete, within the grant period, all the required activities and also expand the development to include infrastructure and interoperability with other existing systems to meet Stage 1 meaningful use requirements.

SCDHEC plays a key role in the state's HIE initiative in support of the grant requirement for the Stage 1 Meaningful use and also due to a critical need for exchanging timely ELRs with medical providers to perform their legally-mandated public health responsibility. This additional funding is being sought to further develop and implement the Sample Master Laboratory Information Management System (LIMS) capabilities to permit additional two-way lab data transmissions with medical providers, the public health agency, and the CDC. The additional funding will allow for sufficient resources to implement overarching infrastructure and interoperability including the LIMS, immunization registry, and syndromic surveillance systems together to enhance SCDHEC's epidemiology and laboratory capacities as a whole. This enhanced capacity will allow information flow that interconnects medical providers' EHRs with the state public health labs and the public health programs for effective disease investigation, surveillance, and intervention. The figure below shows the planned infrastructure to support this initiative.



SCDHEC Infrastructure and Interoperability Support to Satisfy Stage 1 Meaningful Use

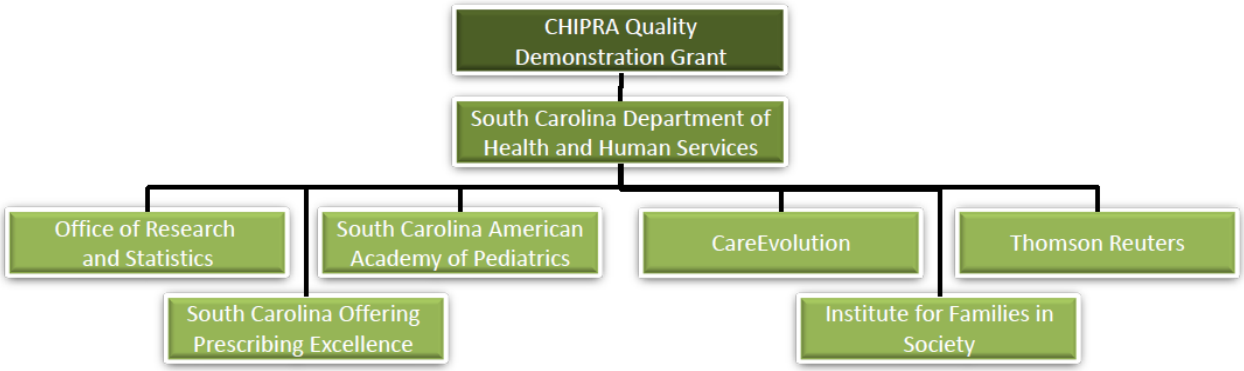
The SCDHEC BOL is a centralized state public health laboratory with statewide jurisdiction. South Carolina Law §44-29-10 and §17-5-560 require reporting of laboratory results

(http://www.dhec.sc.gov/administration/library/CR-009036.pdf), conditions (http://www.scdhec.gov/administration/library/CR-009025.pdf), deaths and their causes from contagious or infectious diseases and or other terrorism to the SCDHEC, BDC, and the Office of Vital Record.

The overall focus of this grant is to successfully transmit two-way reportable lab results among the Bureau of Lab LIMS, the BDC CHESS, the CDC, and other state public health labs and also to allow electronic sending and receiving of lab test orders and test results from the BOL LIMS by medical providers.

CHIPRA Quality Demonstration Grant Program

SCDHHS was awarded one of the 10 CHIPRA Quality Demonstration Grants on February 22, 2010 and received a grant award totaling $9,277,361. The grant program includes a nine-month planning phase to be completed in the first year prior to implementation of the proposed project. SCDHHS has named its demonstration project the QTIP project. Grant partners include ORS, the South Carolina Chapter of the AAP, CareEvolution, Thomson Reuters, the SCORxE program, and IFS.



Grant Objectives:

- Providers will demonstrate the ability to collect the new CHIPRA measures using certified EHR technology and view quality reports prepared by Thomson Reuters.
- Providers will pursue NCQA certification of the PCMH model.
- Providers will identify quality improvement tactics that will impact their practices.

Grant Outcomes:

- SCDHHS will determine the impact of collecting CHIPRA measures and identify any barriers that impeded data collection.
- SCDHHS and its grant partners will create a clinical data repository and the necessary adapters that are capable of delivering quality report cards via SCHIEx to providers' EHRs.

SCDHHS maintains a positive relationship with the state chapter of the AAP, and as part of a grant funding request for the CHIPRA Quality Demonstration Grant Program, SCDHHS, the South Carolina chapter of the AAP, and other grant partners proposed to automate the collection of CHIPRA quality measures; to minimize the apparent overlap in different quality measures sets; and to create a provider friendly continuous closed-loop, quality improvement infrastructure. Using the existing SCHIEx infrastructure, participating providers will "connect" to each other to better deliver coordinated care using the PCMH model. Quality reports will be prepared in the Thomson Reuters Advantage Suite database and then returned to providers via SCHIEx for viewing in their EHR or the ASP EMR module solution.

While the proposed demonstration project focuses on South Carolina's pediatric primary care practices, the lessons learned from this type of project would be valuable to the larger provider community.

The following report example is intended for use by a provider to easily assess quality measures related to individual patients. SCDHHS' vision is that such real-time feedback would alter practice patterns where there are opportunities for improvement in meeting accepted evidence-based best practices.

South Carolina Department of Health and Human Services
Provider Report: Medicaid Patient Level Metrics

Provider Provider 1234 Joan Smith, MD
Time Period CY 2009

Person ID	Gender	Recorded BMI	BMI Status	Chlamydia Screening	EPSDT Dental Visits	ER Visits per Patient	ER Status
153664601	Male	26.2	☹	n/a	✓	3	☹
155078802	Female	24.2	✓	✓	✓	2	✓
155881491	Female	27.1	☹	☹	✓	0	✓
156409502	Female	20.8	✓	✓	☹	1	✓
157265002	Male	21.2	✓	n/a	✓	2	✓
157270502	Female	23.7	☹	✓	☹	5	☹
158056201	Female	24.6	☹	✓	✓	4	☹

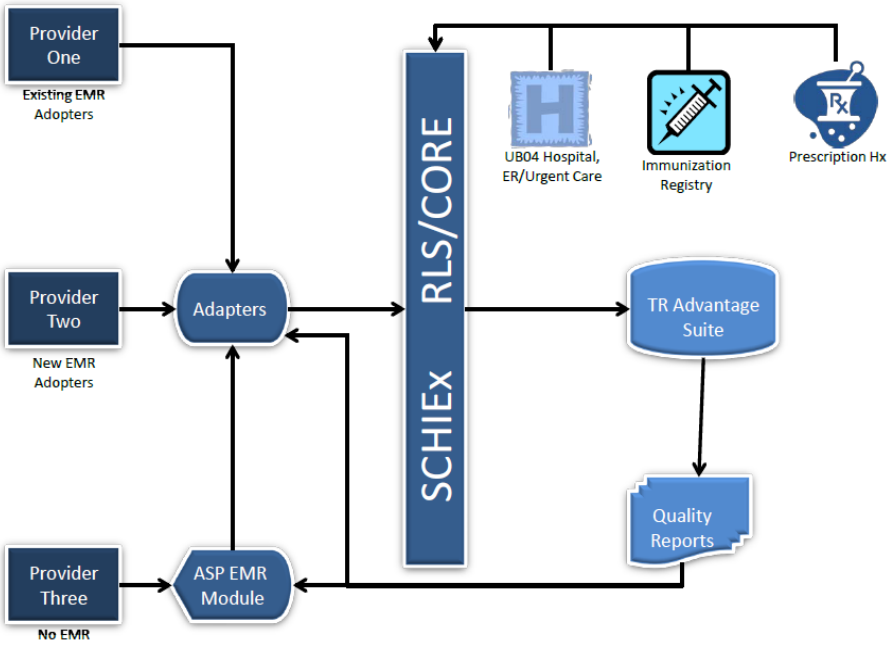
The report example below displays quality measures for the total patient population of a provider.

South Carolina Department of Health and Human Services
Medicaid Total Report: Provider Level Metrics

Subset SCHIP
Time Period CY 2009

Provider ID	Overall Status	BMI Recorded	BMI Status	Chlamydia Screening	Chlamydia Screening Status	EPSDT Dental Visits	Dental Status	ER Visits per 1,000	ER Status
353664603	☹	77%	☹	34%	✓	52%	✓	610	☹
355078802	✓	84%	✓	56%	☹	55%	✓	499	✓
355883493	☹	79%	☹	49%	☹	55%	✓	493	✓
356409502	✓	88%	✓	41%	✓	49%	☹	490	✓
357265002	✓	88%	✓	57%	✓	51%	✓	493	✓
357270502	☹	69%	☹	47%	☹	52%	✓	622	☹
358056203	☹	75%	☹	40%	✓	53%	✓	616	☹

The diagram below (see following page) is a high-level articulation of the overall proposed technology infrastructure to support the grant project:



As the diagram indicates, edge adapters configured with existing provider EHRs (and new adopters) will extract the clinical documentation from the EHR, transform, standardize, codify the resultant data per national standards, and transmit the data to SCHIEx. For providers without full-scale EHRs, an ASP EMR module will be provided to collect the necessary quality data for their patient population. The SCHIEx HIE backbone serves as a clearinghouse of information related to the patient. Emergency room visits, lab results, prescription histories, and immunization data are combined with data directly extracted from the provider EMR. CareEvolution and Thomson Reuters will seamlessly integrate their efforts so that standardized data from edge adapters arrives in the DSS data warehouse, which generates the quality reports. The quality reports are delivered back to the providers as a "tab" on their ASP EMR module or via a web portal integrated with the EMR.

Results from Pilot Test to Transfer Clinical Data to Medicaid Decision Support System

In January 2010, SCDHHS, CareEvolution, Carolina Health Centers, and Thomson Reuters entered into an agreement to test the data exchange, data elements and measure development for EMR data.

Players and roles were as follows:

- Carolina Health Centers: Allowed access to provider network for analysis (about 1,445 patients).
- CareEvolution provided EMR data for the Carolina Health Centers providers.
- Thomson Reuters and CareEvolution partnered to exchange the data.
- Thomson Reuters loaded the data, evaluated data quality, developed the measures and produced results.

The project timeline resulted in success:

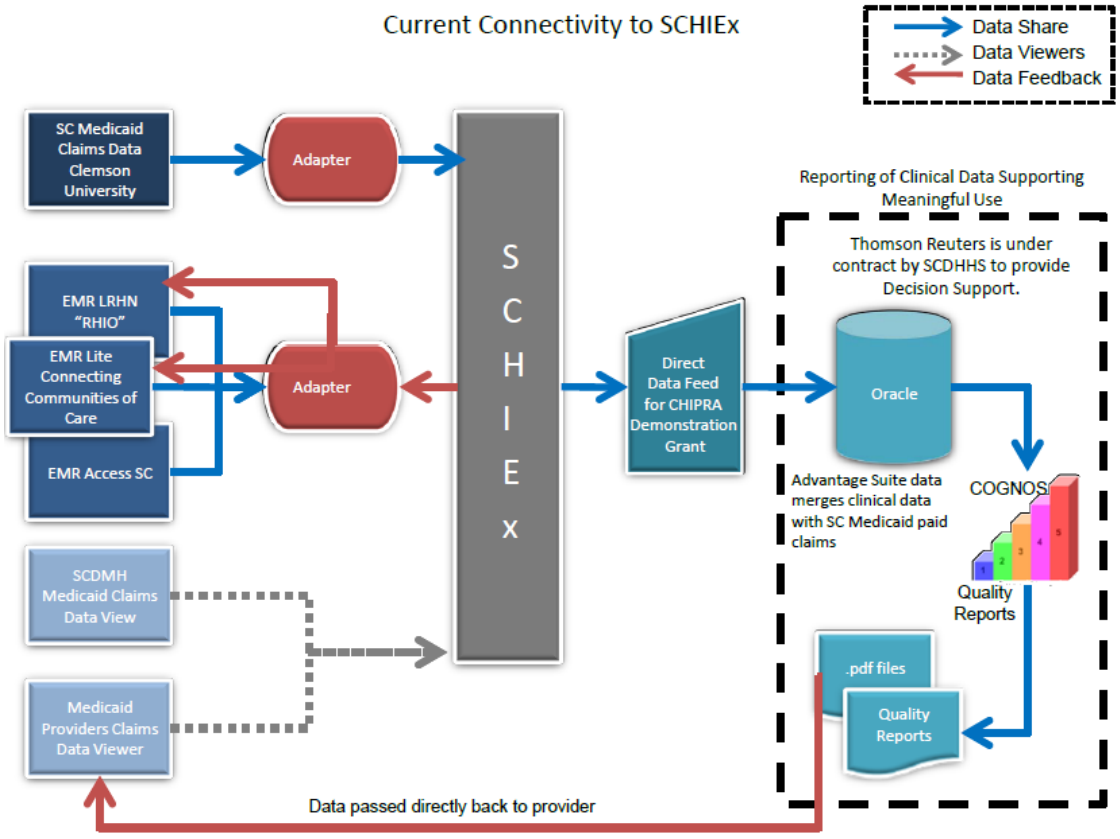
Date	Milestone/Activity
January 2010	Define pilot and obtain permission from SCDHHS and the Carolina Health Centers (the FQHC hospitals in Lakelands on SCHIEX).
February-March 2010	Develop file layout and needed data elements with CareEvolution.
March 2010	Send clinical data from CareEvolution to Thomson Reuters.
March-April 2010	Determine programming logic, new fields, and database changes to store HIE clinical data in Advantage Suite.
May 2010	Load HIE data into Advantage Suite; Develop four CHIPRA (2) and Meaningful Use (2) measure specifications reports.
June 2010	Share data results with SCDHHS, CareEvolution, and the Carolina Health Centers.

The table below lists values and measures that were reported as a result of the pilot project:

Area	Measure	CY 2009 Numerator	CY 2009 Denominator	CY 2009 Rate	Comments
Obesity	The percentage of members 2-18 years of age who had an outpatient visit and who had their body mass index documented during the measurement year.	173	291	59.5%	Denominator reflects the number of (CHC) patients ages 2-18. Numerator reflects BMI reported, not calculated.
Blood Pressure	The percentage of hypertensive patients with blood pressure under control within measurement year.	125	377	33.2%	Denominator reflects the number of patients with hypertension. Numerator reflects BP under control, most recent measure.
Cholesterol	The percentage of patients with LDL under control (< 100).	153	1,173	13.0%	Denominator reflects the number of patients with lab results.

Area	Measure	CY 2009 Numerator	CY 2009 Denominator	CY 2009 Rate	Comments
Hemoglobin	The percentage of diabetic patients with A1C under control.	42	263	16.0%	Denominator reflects the number of patients with diabetes. Numerator reflects A1C under control, most recent measure.

The diagram below shows the technology to be leveraged for transferring clinical data on a larger scale. The pilot project with Carolina Health Centers served as a useful testing environment to better understand how the planned technology will assist providers in meeting meaningful use.



Project Plan to Meet Meaningful Use

The project plan addresses the tasks and subtasks necessary to implement SCHIEx throughout the state. The responsibilities in the project schedule are in alignment with grant partners who are engaged in this project. There are placeholders in the plan for NwHIN governance training and review of state HIE toolkit updates as they become available.

The project schedule lists the tasks and the parties responsible for completion. The responsibilities correlate with the grant team (i.e., the state agencies and partners who are contractually committed to fulfilling role in the initiative). The project schedule also contains tasks or placeholders for the annual review of:

- Strategic plan
- Operational plan
- Business plan (sustainability model)
- Evaluation of policies and legal agreements

The project plan is composed of sections which address project management and grant administration in addition to the tasks associated with meeting the requirements of the five domains. While the initial focus of this plan was to define and schedule tasks associated with implementing SCHIEx state wide, the plan continues to be built out to reflect progress towards building the infrastructure for meeting meaningful use. This is demonstrated in the expanded technical infrastructure section which contains the tasks required to build the connection to the immunization registry, and the work associated with laboratory reporting. There are tasks in the plan to reflect work already in progress pertaining to SCHIEx optional services for meeting meaningful use objectives. SCHIEx currently offers ePrescribing, ASP EMR module, continuity of care documents (CCD), and continuity of care records (CCR).

Task #	Task Name	Start Date	End Date	Resources
1.0	**Project Management**	**1/7/10**	**3/14/14**	**SCDHHS, ORS, SCHIEx**
1.1	Project Planning	1/7/10	11/9/11	SCDHHS, ORS, SCHIEx
1.1.1	SCHIEx organizational chart, relationships, responsibilities	4/5/10	12/31/10	SCDHHS, ORS, SCHIEx
1.2	SCHIEx project plan with key milestones/dates	4/5/10	4/30/10	SCDHHS, ORS, SCHIEx
1.2.1	Project plan updates/ review	4/30/10	4/30/11	SCHIEx, IGC
1.2.2	Project plan updates/ review	5/1/11	12/31/11	SCHIEx, Governance
1.2.3	Project plan updates/ review	2/1/12	12/31/12	SCHIEx, Governance
1.2.4	Project plan updates/ review	2/1/13	12/31/13	SCHIEx, Governance
1.1.4	HIT Summits - ongoing	1/7/10	Ongoing	SCDHHS,HSSC
1.1.5	Coordination with other ARRA Programs	1/7/10	3/14/14	SCDHHS,HSSC
1.2	Project Tracking	4/30/10	3/1/12	SCDHHS, ORS, SCHIEx
1.2.1	Project reporting	4/30/10	3/1/12	SCDHHS, ORS, SCHIEx
1.2.2	Issues management	4/30/10	3/1/12	SCDHHS, ORS, SCHIEx
1.2.3	Risk Management	4/30/10	3/1/12	SCDHHS, ORS, SCHIEx

Task #	Task Name	Start Date	End Date	Resources
1.2.4	Change Management	4/30/10	3/1/12	SCDHHS, ORS, SCHIEx
1.3	Project Evaluation	1/7/10	3/14/14	SCDHHS, ORS, SCHIEx
1.3.1	Define Performance Measures (volume statistics)	1/1/2011	12/31/11	SCHIEx, SCDHHS,ORS
1.3.2	Create reporting tools	1/1/2011	12/31/11	SCHIEx, SCDHHS,ORS
2.0	**Environmental Scan**	**12/1/09**	**1/8/14**	**SCRHRC**
2.1	High level scan	12/4/09	12/4/09	SCRHRC
2.2	Perform Detailed Environmental Scan	12/1/09	1/1/10	SCRHRC
2.3	Compile results of detail scan	1/4/10	1/22/10	SCRHRC
2.4	Summary of Key Findings for Strategic Plan	1/22/10	1/22/10	SCRHRC
2.5	Review results with stakeholders	1/22/10	4/15/10	SCRHRC
2.6	Follow up environmental scan	4/1/11	6/1/11	SCRHRC
2.7	Annual Environmental scan	4/1/12	6/1/12	SCRHRC
2.8	Annual Environmental scan	4/1/13	6/1/13	SCRHRC
2.10	Set goals for HIE adoption/meaningful use	2/16/10	3/29/10	SCRHRC
2.11	Provide input to CITIA	2/16/10	4/12/10	SCRHRC
2.12	Provide input for sustainability model	2/16/10	4/12/10	SCRHRC
3.	**Governance**	**10/16/09**	**3/14/14**	**SCDHHS,ORS**
3.1	Establish Interim Governance	10/16/09	10/16/09	SCDHHS
3.2	Legislation for permanent Governance	1/11/10	7/1/11	IGC
3.3	Document development of governance and policy structures	2/9/10	3/14/14	IGC
3.4	Subcommittees (ongoing)	1/21/10	3/14/14	IGC
3.4.1	Policy and Privacy Subcommittee	1/21/10	3/14/14	IGC
3.4.2	Technology Subcommittee	1/21/10	8/31/11	IGC,ORS
3.4.3	Operations Subcommittee	1/21/10	8/31/11	IGC,ORS
3.4.4	Establish Standing Coordinating Committee	2/1/11	6/30/11	IGC
3.4.5	Evaluate Committee Function and Structure	4/30/11	8/31/11	IGC
3.5	Transition to permanent Governance Structure	6/30/11	12/31/11	IGC
3.6	NHIN Governance training (TBD) - ongoing	6/28/10	11/11/11	IGC, SCHIEx
3.7	Review updates to HIE toolkit (TBD) ongoing	6/28/10	11/11/11	IGC, SCHIEx
3.8	Review Strategic and Operational plan annually	1/15/11	2/8/13	IGC
3.8.1	Review Strategic and Operational plan	1/1/11	2/1/11	IGC
3.8.2	Review Strategic and Operational plan	11/1/11	2/1/12	IGC
3.8.3	Review Strategic and Operational plan	11/1/12	2/1/13	IGC
3.9	Review Alignment with federal initiatives (ARRA)	2/8/11	2/7/14	IGC, SCHIEx
3.9.1	Review SCHIEx alignment with federal programs	1/1/11	4/30/11	IGC, SCHIEx
3.9.2	Review SCHIEx alignment with federal programs	11/1/11	2/8/12	IGC, SCHIEx
3.9.3	Review SCHIEx alignment with federal programs	11/1/12	2/7/13	IGC, SCHIEx
3.9.4	Review SCHIEx alignment with federal programs	11/1/13	2/7/14	IGC, SCHIEx
4.0	**Finance**	**12/1/09**	**3/14/14**	**SCDHHS, Dept. of Com**

Task #	Task Name	Start Date	End Date	Resources
4.1	**Planning (Estimates and staffing Plan)**	**12/1/09**	**12/25/13**	**Dept. of Com**
4.1.1	Contract with SC Department of Commerce	12/1/09	5/31/10	SCDHHS, Dept. of Com
4.1.2	Develop sustainability model	12/1/09	3/31/10	ORS, SCHIEx
4.1.3	Test sustainability model	4/21/10	11/31/11	ORS, SCHIEx
4.1.4	Implement sustainability model	1/1/11	3/14/14	ORS, SCHIEx
4.1.5	Review and evaluate sustainability model	1/1/11	9/30/11	ORS, SCHIEx
4.1.6	Review and evaluate sustainability model	*10/1/11*	9/30/12	ORS, SCHIEx
4.1.7	Review and evaluate sustainability model	10/1/12	9/30/13	ORS, SCHIEx
4.1.8	Review and evaluate sustainability model	10/1/13	3/14/14	ORS, SCHIEx
4.2	**Controls and reporting**	**4/5/10**	**3/14/14**	**ORS,SCDHHS**
4.2.1	HIE program evaluation (quarterly)	6/30/11	12/31/13	SCDHHS
4.2.5	ARRA Reporting (ongoing)	4/10/10	4/10/14	SCDHHS
5.0	**Legal/Policy**	**1/7/10**	**1/6/14**	**Governance**
5.1	Formation of Privacy and Policy Subcommittee	1/7/10	1/7/10	IGC
5.2	Develop policies and procedures including enforcement and audits	1/7/10	12/16/10	IGC
5.3	Develop Participation and Business Associate Agreements for SCHIEx users	4/16/10	12/16/10	IGC
5.4	Incorporate public comments and approve SCHIEx Policy Manual	10/1/10	12/16/10	IGC
5.5	Implement SCHIEx Policy Manual Review Process(mid-year then annual)	7/31/11	1/6/14	IGC
5.6	Review and approve DURSA (NwHIN Pilot)	1/1/11	2/28/11	IGC
5.7	Evaluate and incorporate DURSA requirements into SCHIEx Policy Manual	2/28/11	3/17/11	IGC
5.8	Evaluate DIRECT policy and incorporate into SCHIEx Policy Manual	6/1/11	8/31/11	IGC
5.9	Evaluate and incorporate HIE policies/agreements	1/31/11	6/30/11	IGC
5.10	Evaluate, Develop, and Execute related legal agreements/framework	1/1/11	1/6/14	IGC
5.10.1	SC DHEC and SCHIEx Immunization Registry Agreement	1/1/11	4/31/11	SC DHEC, IGC
5.10.2	SC DHHS Data Provider and Quality Reporting	4/30/11	7/31/11	SC DHHS, IGC
5.10.3	Lab Providers - copies	5/31/11	7/31/11	Quest, IGC
6.0	**Technical Infrastructure**	**1/7/10**	**3/14/14**	**SCHIEx, CE, ORS**
6.1	Move SCHIEx Operations to DSIT			SCHIEx, CE, ORS
6.1.1	Install new servers and network	9/1/10	12/31/10	ORS
6.1.2	Test Database Move and Restore	1/1/11	4/30/11	ORS, CE
6.1.3	Copy data – simulate move to production – Test	5/1/11	6/30/11	ORS, CE
6.1.4	Go Live at DSIT location	7/1/11		ORS, CE
6.2	SCHIEx Core Services	1/7/10		CE, SCHIEx
6.2.1	Specification and Design Phase	1/7/10	3/19/10	SCHIEx, CE
6.2.2	Hardware, SAN, backup design	1/7/10	1/27/10	DSIT, CE, SCHIEx
6.2.3	Network, VPN, Security Design	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.2.4	Environment design (Test, Train, Development,	3/1/10	3/19/10	DSIT, CE, SCHIEx

Task #	Task Name	Start Date	End Date	Resources
	Production)			
6.2.5	Migration Planning	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.2.5.1	Hot backup and testing plan	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.2.5.2	Data migration	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.2.5.3	Validation	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.2.6	DSIT Operations Staff Training	3/1/10	3/19/10	DSIT, CE, SCHIEx
6.3	Procurement and Install	3/22/10	7/9/10	SCHIEx, CE
6.3.1	Hardware and systems software procurement	3/22/10	4/13/10	ORS, DSIT, SCHIEx
6.3.2	Deployment and installation	5/3/10	7/9/10	ORS, DSIT, SCHIEx
6.3.3	Systems Software and DBA Installation	5/3/10	7/9/10	ORS, DSIT, SCHIEx
6.3.4	SAN Configuration	5/3/10	7/9/10	ORS, DSIT, SCHIEx
6.3.5	Network Access and Security	5/3/10	7/9/10	ORS, DSIT, SCHIEx
6.4	Data Migration Validation	7/12/10	7/23/10	SCHIEx, ORS, DSIT
6.4.1	Hot Backup of primary (current production environment)	7/12/10	7/20/10	ORS, DSIT, SCHIEx
6.4.2	Log Shipping	7/12/10	7/23/10	ORS, DSIT, SCHIEx
6.4.3	Validation of Environment	7/12/10	7/23/10	ORS, DSIT, SCHIEx
6.5	Cutover and Transition	7/26/10	7/26/10	SCHIEx, CE, DSIT, ORS
6.5.1	User downtime Announcement	7/26/10	7/26/10	SCHIEx, CE, DSIT, ORS
6.5.2	Cutover	7/26/10	7/26/10	SCHIEx, CE, DSIT, ORS
6.5.2.1	Network transition (DNS, IP changes)	7/26/10	7/26/10	SCHIEx, CE, DSIT, ORS
6.5.3	Production validation	7/26/10	7/26/10	SCHIEx, CE, DSIT, ORS
6.3	Immunization registry	1/7/10	5/31/11	CE, SCHIEx, SC DHEC
6.3.1	Technical design	1/7/10	2/28/11	CE, SCHIEx, SC DHEC
6.3.1.1	CDC HL7 based outbound Query/Response gateway support on current registry	3/1/10	2/28/11	CE, SCHIEx, SC DHEC
6.3.1.2	Define business logic rules (patient match, immunization update, conflict checking)	1/7/10	2/28/11	CE, SCHIEx, SC DHEC
6.3.2.	Build/Configure Adapter	1/7/10	3/31/11	SCHIEx, CE
6.3.3.	Project Initiation/Testing	5/17/10	4/2/11	ORS, SCHIEx, SC DHEC
6.3.3.1	Validate proposed SFTP data flows	5/17/10	4/2/11	ORS, SCHIEx, SC DHEC
6.3.3.2	Send and process test HL7 messages via email	5/24/10	5/28/10	ORS, SCHIEx, SC DHEC
6.3.4	SC DHEC CARES-IIS Driver Interface Development	6/1/10	7/9/10	ORS, SCHIEx, SC DHEC
6.3.4.1	Set up SCHIEx test environment	6/1/10	6/4/10	ORS, SCHIEx, SC DHEC
6.3.4.2	SC DHEC Internet available test environment set up	6/11/10	6/11/10	ORS, SCHIEx, SC DHEC
6.3.4.3	SFTP transaction configuration and testing	6/14/10	7/9/10	ORS, SCHIEx, SC DHEC

Task #	Task Name	Start Date	End Date	Resources
6.3.4.4	Sending Immunization records	6/14/10	6/25/10	ORS, SCHIEx, SC DHEC
6.3.4.5	Query for immunization records	7/9/10	7/9/10	ORS, SCHIEx, SC DHEC
6.3.5	Adaptor integration	6/30/10	7/23/10	ORS, SCHIEx, SC DHEC
6.3.5.1	Integration with State RLS	6/30/10	7/9/10	ORS, SCHIEx, SC DHEC
6.3.5.2	Configuration of message triggers	7/12/10	7/23/10	ORS, SCHIEx, SC DHEC
6.3.5.3	Sending immunization records	7/12/10	7/16/10	ORS, SCHIEx, SC DHEC
6.3.5.4	Query for immunization records	7/20/10	7/23/10	ORS, SCHIEx, SC DHEC
6.3.5.5	SC DHEC Internet available production environment set up	7/16/10	7/16/10	ORS, SCHIEx, SC DHEC
6.3.5.6	Configure and validate connectivity and authentication	7/23/10	7/23/10	ORS, SCHIEx, SC DHEC
6.3.6	Validation/ Test	7/26/10	8/2/10	ORS, SCHIEx, SC DHEC
6.3.6.1	Data validation	7/26/10	7/30/10	ORS, SCHIEx, SC DHEC
6.3.6.2	Load testing	8/2/10	8/2/10	ORS, SCHIEx, SC DHEC
6.3.6.3	Production Go Live	8/10/10	5/2011	ORS, SCHIEx, SC DHEC
6.3.7	Pilot /Clinical Validation (Palmetto Primary Care Physicians	8/10/10	5/31/11	ORS, SCHIEx, SC DHEC
6.3.7.2	Validate cycle	8/10/10	5/31/11	ORS, SCHIEx, SC DHEC
6.3.8	Publish specifications and test harness for State	8/10/10	5/31/11	ORS, SCHIEx, SC DHEC
6.4	Lab Data Exchange	1/7/10	4/19/10	ORS, SCHIEx, CE
6.4.1	Resolve CLIA issues for data exchange and sharing	1/7/10	8/31/10	IGC
6.4.2	Collaborate with CITIA re: Lab Hub Solution related to SCHIEX MPI/RLS if needed	1/7/10	9/2011	IGC, ORS, SCHIEx, CE
6.4.3	SC DHEC Reportable Labs	TBD	TBD	
6.5	Medication History Gateway	1/7/10	5/10/10	ORS, SCHIEx, CE
6.5.1	HIEBUS 2010 RXHUB certification	1/7/10	10/2010	ORS, SCHIEx, CE
6.5.2	Medication HX Stand Alone Certification		6/2011	
6.5.3	SCHIEx adapter implementation to SureScripts exchange	1/8/10		ORS, SCHIEx, CE
6.6	Connect to NwHIN- VLER Pilot	1/7/10	9/2011	ORS, SCHIEx, CE
6.6.1	Complete eligibility application - VA sponsor	1/1/2011	1/31/2011	ORS, SCHIEx, CE
6.6.2	Develop custom Gateway and complete technical testing	2/1/2011	7/15/2011	ORS, SCHIEx, CE
6.6.3	Submit Technical testing results to Coordinating Committee	8/1/2011	8/31/2011	ORS, SCHIEx, CE
6.6.4	Finalize VLER pilot partners and on boarding	2/1/2011	6/1/2011	HIT Coordinator, VA,

Task #	Task Name	Start Date	End Date	Resources
	plans			SCHIEx
6.6.5	Schedule NwHIN trial implementation	8/1/2011	8/31/2011	ORS, SCHIEx, CE
6.6.6	Go Live VLER Pilot	1/1/2011	9/30/2011	VA,ORS, SCHIEx, CE
6.7.	Optional Services supporting MU	1/7/10		SCHIEx, CE, ORS
6.7.1	Quality Reporting for MU	2/1/11	12/31/11	SCDHHS, SCHIEx, ORS, CE
6.7.11	Determine requirements for SC Medicaid	4/1/11	7/31/11	SCDHHS
6.7.12	Develop/implement technical plan	8/1/11	12/31/11	SCDHHS, SCHIEx, ORS, CE
6.7.13	Evaluate Medicare options/requirements	4/1/11	8/31/11	SCDHHS, CMS, SCHIEx, ORS, CE
6.7.2	Enable Care Coordination for production use (CHIPRA Pilot)	6/1/10	12/31/11	SCHIEx, ORS, CE
6.7.3	Enable ePrescribing for production use	1/1/11	7/31/11	ORS, CE
6.7.31	Pilot test ePrescribe with selected providers (SC DMH)	2/1/11	7/31/11	ORS, CE
6.7.4	Enable PQRI reporting for production use	6/1/10	TBD	SCHIEx, CE, ORS
6.7.5	Enable EMR Lite for production use	1/1/11	6/3/11	ORS, CE
6.8	DIRECT	9/2010	9/2011	SCHIEx, ORS, CE
6.8.1	DIRECT engagement and reference implementation	9/2010	12/2010	SCHIEx, ORS, CE
6.8.2	Test deployment and SCHIEx integration	1/2011	3/2011	SCHIEx, ORS, CE
6.8.3	Rollout of DIRECT implementation to SCHIEx Environment	4/2011	6/2011	SCHIEx, ORS, CE
6.8.4	DIRECT production pilot	6/2011	8/2011	IGC, CE, ORS
6.8.5	DIRECT rollout of system	8/2011	9/2011	IGC, SCHIEx, ORS, CE
7.0	**Business and Technical Operations**	**1/7/10**	**10/31/12**	**ORS, SCHIEx**
7.1	Formalize business operations including Business Continuity	8/30/10	2/11/11	ORS, SCHIEx
7.2	Update Standard Operating Procedures	3/16/10	10/31/12	ORS, SCHIEx
7.3	SCHIEx Staffing	1/7/10	12/31/11	ORS, SCHIEx
7.3.1	Project staffing/ Key Leadership	1/7/10	12/31/11	SCHIEx
7.4	Reporting Requirements for HIE	2/16/10	8/2/10	SCDHHS
7.4.1	Review guidance on ONC reporting requirements	2/16/10	8/2/10	SCDHHS
7.4.2	Develop/revise reporting tools per guidance	2/16/10	8/2/10	SCDHHS
7.5	Signoffs	4/30/10	5/31/10	SCDHHS
7.5.1	Medicaid Director - sign off strategic and operational plans	4/30/10	4/30/10	SCDHHS
7.5.2	HIE Program evaluation (ongoing)	5/31/10	11/30/11	Governance

SCHIEx Financial Model

SCHIEx will be funded by all participants who connect to the exchange. This includes EPS, EHs, private payers, state and public agencies, and other medical entities. The pilots and existing project will migrate to the new sustainability model. Where there are contractual arrangements in place for state and public agencies, a portion of the money exchanged will be allocated to pay the fees associated with connecting to the HIE.

The South Carolina Department of Commerce expanded the Business Plan to include a definitive payment structure for other payers including state agencies and other medical entities. By expanding the participants in the HIE, the potential revenue stream increases and potentially the cost for connecting will decrease.

Fee Schedule

The fee schedule that will support the operation of SCHIEx is a tiered program that varies based on the participant category connecting to the exchange. This pricing schedule was developed to equitably distribute costs between hospitals, clinics, private practices and other medical facilities. The fees were calculated based on the revenue required to cover the SCHIEx administration costs, the total number of potential SCHIEx users, and the expected SCHIEx adoption rate or market penetration.
SCHIEx participants will share the ongoing cost of operating SCHIEx core services through annual subscription fees as approved by the SCHIEx Governing Authority. The following SCHIEx Fee Schedule is approved for the time period beginning January 1, 2011. To encourage early participation in SCHIEx, the Governing Authority is offering discounts on fees for the time period beginning January 1, 2011 and ending December 31, 2012. The Governing Authority will review the fee schedule on an annual basis. Based on the annual review in 2012, the Governing Authority will make any necessary adjustments to the fees, either upward or downward, to ensure the financial sustainability of SCHIEx and to ensure fair cost allocation among all users of SCHIEx to take effect in January, 2013.

Participant Category	Annual Subscription Fee	*Discounted* Annual Subscription Fee
Physician Practice/Clinic	$230 base fee per facility plus $230 per physician	$150 base fee per facility plus $150 per physician
Dental Practice/Clinic	$230 base fee per facility plus $230 per dentist	$150 base fee per facility plus $150 per dentist
Optometry Practice/Clinic	$230 base fee per facility plus $230 per optometrist	$150 base fee per facility plus $150 per optometrist
Podiatry Practice/Clinic	$230 base fee per facility plus $230 per podiatrist	$150 base fee per facility plus $150 per podiatrist
Chiropractic Practice/Clinic	$230 base fee per facility plus $230 per chiropractor	$150 base fee per facility plus $150 per chiropractor

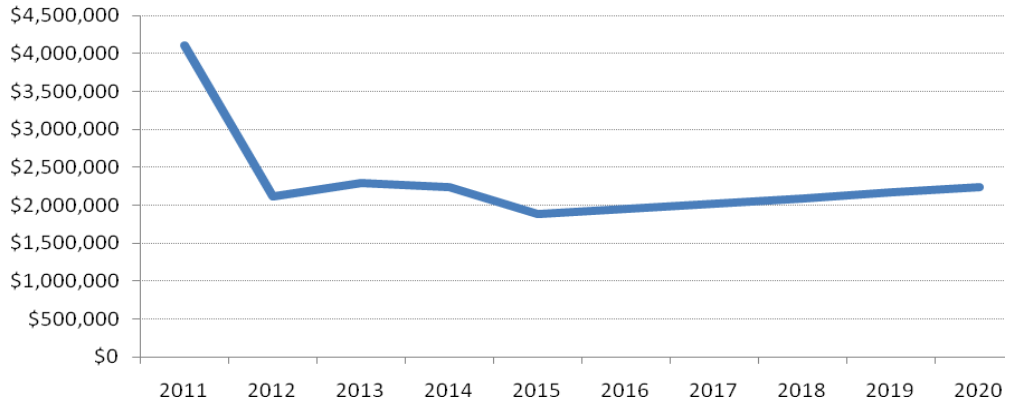
Participant Category	Annual Subscription Fee	*Discounted* Annual Subscription Fee
Nurse practitioner, certified nurse midwife or physician assistant* practicing in a nontraditional (non-physician practice) setting	$230 base fee per facility plus $230 per nurse practitioner, certified nurse midwife or physician assistant*	$150 base fee per facility plus $150 per nurse practitioner, certified nurse midwife or physician assistant*
Hospital **		
From 1 to 15 beds	$157 per bed	$103 per bed
From 16 to 25 beds	$2,500 plus $151 per bed over 16	$1,600 plus $98 per bed over 16
From 26 to 49 beds	$4,000 plus $144 per bed over 26	$2,600 plus $94 per bed over 26
From 50 to 99 beds	$7,500 plus $137 per bed over 50	$4,900 plus $89 per bed over 50
From 100 to 199 beds	$14,400 plus $130 per bed over 100	$9,400 plus $85 per bed over 100
From 200 to 299 beds	$27,400 plus $124 per bed over 200	$17,900 plus $81 per bed over 200
From 300 to 399 beds	$39,800 plus $117 per bed over 300	$26,000 plus $76 per bed over 300
From 400 + beds	$51,500 plus $110 per bed over 400	$33,600 plus $72 per bed over 400
Skilled Nursing and Hospice Facility**		
From 1 to 15 beds	$78 per bed	$51 per bed
From 16 to 25 beds	$1,250 plus $75 per bed over 16	$800 plus $49 per bed over 16
From 26 to 49 beds	$2,000 plus $72 per bed over 26	$1,300 plus $47 per bed over 26
From 50 to 99 beds	$3,750 plus $68 per bed over 50	$2,450 plus $44 per bed over 50
From 100 to 199 beds	$7,200 plus $65 per bed over 100	$4,700 plus $42 per bed over 100
From 200 to 299 beds	$13,700 plus $62 per bed over 200	$8,950 plus $40 per bed over 200
From 300 to 399 beds	$19,900 plus $58 per bed over 300	$13,000 plus $38 per bed over 300
From 400 + beds	$25,750 plus $55 per bed over 400	$16,800 plus $36 per bed over 400
Home Health Agency	$2,000 flat fee	$1,300 flat fee
Community Case Management Provider	$2,000 flat fee	$1,300 flat fee
Telemonitoring Provider	$2,000 flat fee	$1,300 flat fee
Ambulatory Surgical Facility	$2,000 flat fee	$1,300 flat fee
Pharmacy	$1,000 flat fee	$650 flat fee
Pharmaceutical Case Management (Not Affiliated with a Pharmacy)	$1,000 flat fee	$650 flat fee

Participant Category	Annual Subscription Fee	*Discounted* Annual Subscription Fee
SC State Agencies Department of Health and Environmental Control (DHEC) Department of Mental Health (DMH)	Every state agency fee will be separately negotiated and approved by the IGC.	Every state agency fee will be separately negotiated and approved by the IGC. The negotiated fee for DHEC at this time is $20,000. The negotiated fee for DMH at this time is $30,000.

* Includes physician assistants practicing at a Federally Qualified Health Center or Rural Health Clinic that is led by a physician assistant.
** Fee schedule bed counts for hospitals, skilled nursing and hospice facilities are based on the Average Daily Census. The hospital participant category also includes psychiatric, alcohol and drug and rehabilitation hospitals.

SCHIEx Administration and Technical Support Costs

The program costs associated with the implementation, technical support, customer support, administration and oversight of SCHIEx vary over time. The initial costs, which are funded by the HIE Cooperative Agreement, are higher than the later years because the administrative and technical work for developing and implementing the exchange are costlier than the maintenance and support once in place. As shown in the figure below, total SCHIEx administration costs are expected to fall from approximately $4.1 million in 2011 to $1.9 million in 2015. From 2015 onwards, it is assumed that costs will inflate at a rate of 3.5% annually.



Expected Total SCHIEx Program Costs, 2011-2020

Because federal grant funds are expected to cover the SCHIEx program costs from 2011 through 2014, demonstrating financial sustainability is most vital for years 2015 and beyond. The table below delineates the costs expected in 2014, which is the baseline year for program costs in succeeding years. These costs include the technical and support personnel at ORS, who will manage SCHIEx, the contract

with CareEvolution, costs associated with data hosting, compliance consultation, and staffing the Governance Committee.

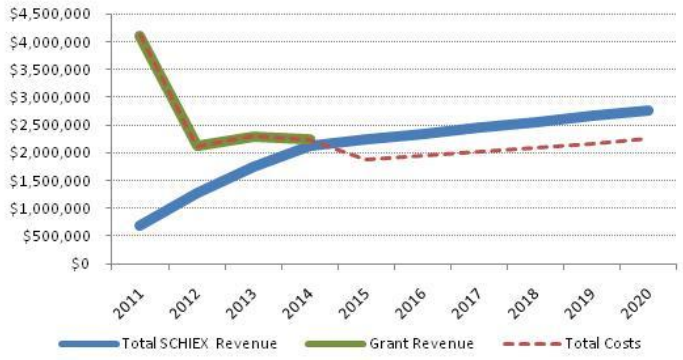
Personnel Costs				
	FTEs	**Salary**	**Fringe**	**Total**
Program Manager	0.25	$90,000	$29,700	$29,925
Executive Director	1.00	$90,000	$29,700	$119,700
Program Coordinator	1.00	$52,000	$17,160	$69,160
Senior Database Admin	1.00	$70,000	$23,100	$93,100
IT Manager II	1.00	$80,000	$26,400	$106,400
Grants Coordinator / Program Assistant	1.00	$35,000	$11,550	$46,550
Administrative Coordinator II	1.00	$45,000	$14,850	$59,850
Personnel Total	**6.25**	**$462,000**	**$152,460**	**$524,685**
Other Administrative Costs				
	FTEs	**Cost / FTE**		**Total**
Tort Liability	6.25	$64		$400
Supplies + Postage	6.25	$750		$4,688
Software	6.25	$2,300		$14,375
Internal Operations	6.25	$1,000		$6,250
Telephones	6.25	$350		$2,188
Rent	6.25	$3,185		$19,906
Technical / Contract Costs				
				Total
Replacement Hardware				$40,000
CareEvolution HIE Costs				$1,128,161
Legal Consultation				$15,000
HIPAA Consultation				$12,500
DSIT Hosting				$120,292
Networking / Bandwidth				$1,000
			Grand Total	$1,889,444

SCHIEx Program Annual Administration Cost Assumptions

Financial Scenario Analyses

Using the provider population sizes and adoption rate estimates, several scenarios have been prepared to demonstrate financial sustainability for SCHIEx. With best estimate adoption among hospitals and other groups, the resulting SCHIEx revenue of $2,232,000 will cover the expected SCHIEx operating costs

of $1,889,000 with a margin of 18%. The figure below illustrates expected SCHIEx costs and revenue for the best estimate adoption rate scenario.



Expected SCHIEx Program Costs and Revenue (Best Estimate Adoption Case), 2011-2020

If more conservative adoption rates are applied to either the hospital population or the physician practice group and clinic populations, SCHIEx will still maintain financial sustainability. In the case where physician group and clinic adoption rates are conservative and hospital adoption rates are left at the best estimate levels, SCHIEx still operates with a 4% operating margin in 2020. If both the hospital and physician group adoption rates are at the lowest, conservative level, then operating costs will exceed SCHIEx revenue. However, the revenue generated from SCHIEx during the grant-sustained period will provide a buffer that will keep the program solvent beyond 2020. During this time, more information will be available to adjust prices if necessary. Based on the informal hospital CIO surveys and the environmental scan, the conservative adoption rate scenario for hospitals is highly unlikely.

If both the hospitals and physician groups adopt at the optimistic adoption rates, SCHIEx will operate with a 90% margin in 2015. At this time, user fees could conceivably be reduced substantially, as the costs would be distributed among a much larger population.

EHR Communication Plan

The overall communications goal of the SMHP is to raise awareness among Medicare/Medicaid providers of EHR incentive payments and the specific requirements associated with the incentive program. SCDHHS has already begun this effort, and plans continuous interaction with providers utilizing a variety of communication methods. To determine the relative success of these efforts, SCDHHS will employ several measurements, including benchmarking off of projected EHR adoption rates outlined in the Business Plan, reviewing HIT awareness rates measured in the subsequent Environmental Scans, and continually monitoring provider feedback.

The results of the 2009 Environmental Scan indicated that a relatively low percentage (<50%) of primary care physician practices reported awareness of the HITECH Act, meaningful use, or EHR incentive payments. The survey also indicated that those who were aware of incentive payments lacked specific knowledge about how to qualify. Furthermore, those who had not yet adopted EMR technology in their practices were ambivalent to the cost/benefits associated with the investment. For these reasons, SCDHHS chose to focus its initial communications strategy on informing physicians and staff of the background of the HITECH Act, the associated rules for qualifying for incentive payments, and the overall benefits of EHR adoption. This strategy, and corresponding messaging, can be modified depending on the results of the future Environmental Scans and adoption rates. For example, a future high awareness rate and corresponding low adoption rate would likely indicate the need for a strategic shift.

Current and planned communication methods fall into two general categories: 1) written communication from SCDHHS to individual providers and provider groups; 2) face-to-face interaction among SCDHHS, its business partners, providers and other key stakeholders. SCDHHS, ORS, and HSSC have also aligned their efforts to brand the HIT initiatives in the state with distinct logos for SCHIEx, and South Carolina's Regional Extension Center:

Listed below are a several specific examples of how these methods are currently operationalized.

Medicaid Bulletins

Medicaid Bulletins will be used to communicate vital information pertaining to the South Carolina Medicaid EHR Incentive Program. Electronic Medicaid Bulletins are the primary mode for communicating important policy information to individual Medicaid providers. Archived bulletins are available at www.scdhhs.gov for reference purposes. Providers can enroll online to receive Medicaid Bulletins such as those pertaining to the EHR incentive program and meaningful use. E-Bulletin subscription is also part of the provider enrollment business process for prospective providers. More than 8,000 practices and health care entities currently subscribe to the Medicaid Bulletin listserv.

In order to facilitate two-way communication, SCDHHS solicits and responds provider comments through a dedicated email address (hitsc@scdhhs.gov), which is posted predominantly on the SCDHHS HIT website (http://www.scdhhs.gov) and is listed in *The Provider Perspective*. Questions and their

corresponding answers will also be periodically posted on the SCDHHS HIT website. The newsletter will also list additional resources, such as websites from state and federal HIT-related organizations, for providers interested in learning more.

South Carolina Medicaid EHR Incentive Program User Guides

The SCDHHS Bureau of Federal Contracts and Grants Administration (in consultation with the Office of General Counsel and the HIT Division) developed detailed State Level Repository user guides for providers. Guidance for EPs and EHs is separate and clearly identified. This guidance details information concerning the types of Medicaid providers eligible for the program, how to apply, and other program participation requirements. Information concerning audits, incentive payment recoupment, and provider appeals is also included. The guides are available on the SCDHHS HIT website (http://www.scdhhs.gov/hit).

Provider Marketing Contract

SCDHHS contracted with the Maxim Communications Group, Inc. to assist with the development of meaningful use educational materials and additional provider outreach strategies. A series of special brochures were produced that focused on several aspects of the HIT initiative and the HITECH Act, including: Medicaid incentive payments, Medicare incentive payments and associated penalties for non-adoption, technology and EHR certification, and the Regional Extension Center. Importantly, the series adhered to consistent themes and design elements that were mirrored in other mediums, including *The Provider Perspective*, portable displays, educational PowerPoint presentations, and web content maintained by the South Carolina AHEC. Further information is available online at http://www.palmettohit.net .

Provider Education and Outreach Contract with AHEC

SCDHHS contracted with the South Carolina AHEC to provide introductory face-to-face education for providers regarding the EHR incentive program and other aspects of the statewide HIT initiative. The educational program offered basic information about EHRs and benefits of EHRs to providers and their patients, such as disease management and preventive care. Because AHEC maintains offices throughout South Carolina, the opportunity to engage providers directly was greatly enhanced and served to reinforce formal written communications. AHEC utilized the educational materials produced by Maxim Communications Group to reach broad audiences, including individual providers, practice staff, and provider groups and associations (e.g. School Nurses Association, Academy of Family Practices, South Carolina Medical Association, Office of Rural Health, and the South Carolina Hospital Association). AHEC scheduled regional meetings dedicated to sharing news about EHR incentives with providers.

- September 17, 2010 (Upstate)
- October 13, 2010 (Mid Carolina)
- November 5, 2010 (PeeDee)
- November 19, 2010 (Lowcountry)

AHEC also developed a special educational supplement to *The Journal of the South Carolina Medical Association* that featured in-depth articles concerning various aspects of EHR adoption.

Stakeholder Summits

Since June 2009, SCDHHS and HSSC have hosted a series of 10 HIT summits. The purpose of these summits is to generate broad stakeholder involvement in the statewide HIT initiative. These summits have focused on various aspects of the HIT initiative and feature updates on state and federal activities, national guest speakers, and discussion panels. Attendees have included representatives from all major state health care associations, vendors, colleges and universities, consumer advocates, and other state agencies. The meetings have provided an open forum to discuss challenges and opportunities from an array of perspectives. Specific topics addressed at the summits have included:

- Meaningful use criteria
- Privacy and security
- EHR standards and certification
- Engaging consumers
- Practice management and EHRs
- How to begin the adoption process

CITIA- SC

CITIA-SC is a free service to certain South Carolina healthcare providers which was made possible by the federal Regional Extension Center grant awarded to HSSC. CITIA-SC plays an important role in the overall communication strategy through its direct contact with EPs throughout the state as they adopt and expand health information technologies in their practices. Through its direct contact with providers, CITIA-SC can provide valuable feedback to SCDHHS regarding HIT-related messaging and potential for improvements. Among the services provided by CITIA-SC:

- Assist with analyzing the health IT needs of the practice, clinic or hospital
- Assist with identifying affordable EHR systems that meet the needs of the practice
- Provide onsite management support, workflow redesign, training and troubleshooting
- Offer insight into patient privacy and security issues

- Assist the practice in taking the steps needed to receive an incentive payment and become a meaningful user
- Provide support on generating quality reports from the EHR

Interaction with MMIS and MITA

Medicaid Information Technology Architecture (MITA) State Self-Assessment (SS-A)

The SCDHHS Medicaid Information Technology Architecture (MITA) state self-assessment (SS-A) report was submitted to CMS in November 2009. The results of the report are valuable as planning efforts are underway for the MMIS replacement project. A brief summary of the SS-A results follows.

Business Capability Assessment: SCDHHS has identified manual processes that can be improved through automation. Automated processes will, in some cases, be more effective and cost-efficient; in other cases, they will provide better services to providers, beneficiaries, or other stakeholders. SCDHHS has identified some agency-internal business processes that can be standardized and streamlined. A more efficient agency can better serve the Medicaid community. SCDHHS believes that better service produces better health outcomes.

Infrastructure Assessment: SCDHHS has identified system interfaces and software applications that should be pulled into the Medicaid Enterprise system in order to provide more security, better data access, and more interoperability among systems.

Some key priorities for the Medicaid Enterprise transformation are: real-time adjudication of claims; enhanced screening and credentialing of enrolling and enrolled providers; better, faster, more accurate communication with beneficiaries, providers, and other stakeholders; empowering beneficiaries by providing them more access to provider and health information; and laying the groundwork for a future all-health-services enterprise through participation with other state health agencies. The shared underlying goal of all these priorities is the improvement of health outcomes for South Carolinians.

ARRA and MITA Connection

The SS-A report was completed at a critical time: as plans move forward with the MITA initiative, SCDHHS is also working to implement key HIT provisions of ARRA. These provisions are intended to promote health care quality and health information exchange through the use of certified EHR technology. They have significant consequences for the development of the Medicaid Enterprise:

- SCDHHS is the agency tasked with promoting, measuring and rewarding meaningful use of certified EHRs for the state of South Carolina. The future Medicaid Enterprise must facilitate the

measuring, tracking and reporting of meaningful use and the distribution of incentive payments to meaningful users – and it must do so soon.

- Use of a statewide HIE will promote sharing of health care information and improvement of health outcomes throughout our state. The future Medicaid Enterprise must make optimal use of the data exchange available through SCHIEx.

MITA and ARRA are thus highly interdependent. MITA emphasizes the role of technology in improving health outcomes, and ARRA lays out a few key routes for that transformation.

Medicaid Management Information System (MMIS) Replacement Project

SCDHHS is in the planning stage of replacing the MMIS, which will align with the MITA initiative. As SCDHHS meets the benchmarks of the MITA maturity models, the exchange of claims data with SCHIEx will migrate to a bi-directional real time exchange. As planning efforts continue for the redesign of the MMIS, SCDHHS and its stakeholders must consider how the functionality of the new MMIS and SCHIEx will interact to achieve mutual goals such as expediting the prior authorization process and consumer access to healthcare data. At present, the current MMIS will undergo no changes for the South Carolina Medicaid EHR Incentive Program due to near-term plans for a replacement MMIS. The existing credit adjustment process is used for making incentive payments; SCDHHS added additional fund codes to track incentive payments. Future plans will be coordinated to ensure the new MMIS will continue to support the credit adjustment process for the South Carolina Medicaid EHR Incentive Program. SCDHHS anticipates that the new MMIS will reduce manual processes for the HIT Division such as verifying that providers meet eligibility requirements such as enrollment in Medicaid, patient volume, and hospital-based exclusions.

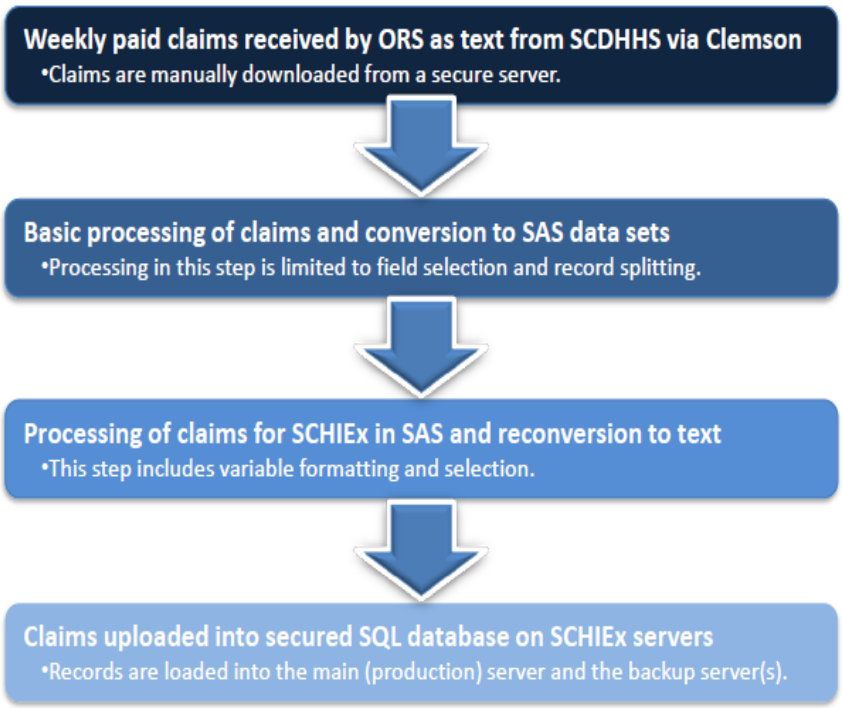
SCHIEx Interface

Medicaid claims data is sent via a weekly data feed from Clemson University to ORS. Data fields sent include:

- Claims identifiers
- Diagnosis codes and descriptions
- Admit/discharge/service dates (formatted MM/DD/YYYY)

- Prescription drug details (name with dosage, therapeutic class, refills, days supply, name and ID number of prescriber)
- Service details (procedure code and name, units)
- Patient admit/discharge status
- Patient ID and category
- Billing details (DRG, code modifier, fee-for-service vs. capitated indicator, payment date)
- Claim type
- Provider name, type, specialty, and ID numbers for both billing and rendering providers

Data sets flow through a Medicaid adapter into SCHIEx. The steps for receiving, processing, and formatting the data are provided below. Claims data is processed and converted to SAS data sets.



Stakeholders

The table below identifies key state agencies and other state organizations involved in HIT activities throughout the state.

Entity	HIT role in South Carolina
South Carolina Department of Health and Human Services (SCDHHS)	➢ HIE Cooperative Agreement Program Grantee ➢ South Carolina Medicaid EHR Incentive Program Administrator ➢ HIT Summit Host ➢ e-Health Group Member ➢ IGC Member ➢ CHIPRA Quality Demonstration Grant Recipient
State Budget and Control Board's Office of Research and Statistics (ORS)	➢ State HIT Coordinator ➢ HIE Cooperative Agreement Partner ➢ State Data Warehouse Oversight ➢ Operates SCHIEx ➢ e-Health Group Member ➢ IGC Member
South Carolina Department of Health and Environmental Control (SCDHEC)	➢ HIE Cooperative Agreement Partner ➢ Immunization and Disease Registries Owner ➢ IGC Member
Health Sciences South Carolina (HSSC)	➢ HIT Summit Host ➢ e-Health Group Member ➢ Regional Centers Cooperative Agreement Recipient ➢ IGC Member
South Carolina Rural Health Research Center (SCRHRC)	➢ Environmental Scan Contractor ➢ Regional Centers Cooperative Agreement Partner
Department of Mental Health (DMH)	➢ The DMH Telepsychiatry Program Administrator
South Carolina Department of Commerce	➢ SCHIEx Business Sustainability Model Contractor
Division of State Information Technology (DSIT)	➢ SCHIEx host environment
South Carolina Primary Care Association	➢ Regional Centers Cooperative Agreement Partner
South Carolina Office of Rural Health (SCORH)	➢ Regional Centers Cooperative Agreement Partner

Entity	HIT role in South Carolina
Carolinas Center for Medical Excellence (CCME)	➢ Regional Centers Cooperative Agreement Partner
Florence-Darlington Technical College	➢ Workforce Development Grant Recipient
Carolina Health Centers	➢ Quality Reporting Pilot Participant ➢ LRHN member
Thomson Reuters	➢ Quality Reporting Pilot Participant ➢ CHIPRA Quality Demonstration Grant Partner

Section B: The "To-Be" Landscape

South Carolina has taken significant steps in developing a statewide vision of its HIT future. Earlier in this document, details of the state HIT summit activities were described, including the cohesive HIT vision the e-Health group and summit attendees developed:

> Our vision is for a healthier South Carolina where shared health information is a critical tool for improving the overall performance of the health care system. The health care community will work together to achieve clinical effectiveness through the use of information technology, delivering better overall value and improving quality of life for South Carolinians.

Following a similar thread, SCDHHS expects that the South Carolina Medicaid EHR Incentive Program will promote the use of certified EHRs and the exchange of clinical data and lead to improved healthcare quality while providing financial incentives to eligible Medicaid providers. In 2015, SCDHHS expects the HIT "to-be" environment to consist of: a functioning statewide HIE (SCHIEx) that is well-integrated with existing state systems; an organized and well-supported process to administer the South Carolina Medicaid EHR Incentive Program; providers who are adopters and meaningful users of certified EHR technology; and a permanent governance committee with policies and procedures that allow for the movement and exchange of data in a secure, interoperable, and authorized manner. The redesigned MMIS will continue sharing Medicaid claims data with ORS for display in the Medicaid viewer.

As the provider community adopts certified EHR technology and connects to SCHIEx, more providers will likely produce quality measurements and reports. With the increased availability of clinical data through SCHIEx, SCDHHS will link claims data to its corresponding clinical data and produce quality reports for providers. With the analysis of quality reports, providers will be able to positively impact the quality of care they deliver to Medicaid beneficiaries. In turn, SCDHHS will use the quality measures to shape healthcare policies in a meaningful manner.

Ultimately, South Carolina expects these major themes to emerge from the HIT activities occurring throughout the state:

- Grant funding will provide the financial resources to establish the needed technical infrastructure in light of declining state resources.
- Focused coordination and collaboration will keep major HIT initiatives connected including the MMIS replacement project, HIE grant, Regional Extension Center grant, the South Carolina Medicaid EHR Incentive Program, and the CHIPRA Quality Demonstration grant. The synergy created will facilitate certified EHR technology adoption and ensure budget resources are leveraged effectively.

- Baseline EHR adoption rates look promising, and Medicaid and Medicare incentives will facilitate additional interest in certified EHR adoption. SCDHHS anticipates the adoption rates to increase each year over time.

- SCDHHS believes a closed loop system reduces the administrative burden for providers, integrates claims and encounters data, improves outcomes, and provides grounds to update reimbursement methodologies.

SCDHHS recognizes that there will be changes with technology and meaningful use criteria as well as insertions of new technology as the nation's HIT landscape changes and healthcare professionals become more sophisticated users of HIT and certified EHR technology. South Carolina will accommodate these changes and make adjustments in HIT operations, particularly SCHIEx, as necessary.

Grant Activities

HIE Cooperative Agreement Program

The HIE Cooperative Agreement Program provides funding for South Carolina to scale SCHIEx for statewide use. SCHIEx will provide a means by which providers can transmit clinical data to SCDHHs in the form of quality reports that demonstrate meaningful use. Grant funding will also support the development needed to connect the state's disease and immunization registries to SCHIEx.

This grant also provides funding for an appropriate governance structure to be established to oversee SCHIEx operations along with the necessary legal agreements for the data exchange. Currently, the IGC is operational and maturing in structure and operations. SCDHHS will maintain a steady leadership presence with this grant.

Health Information Technology Extension Program: Regional Centers Cooperative Agreement Program

The Regional Centers Cooperative Agreement Program provides funding for South Carolina to assist providers with the implementation of certified EHR technology and the pursuit of meaningful use. This grant provides the structure for providers to seek assistance in assessing their HIT needs and determining the solution that best meets the needs of their practices.

CITIA reached its target of recruiting 1,000 providers by April 2011. SCDHHS anticipates that the majority of these providers will be eligible for the South Carolina Medicaid EHR Incentive Program. However, the actual number of providers eligible for the South Carolina Medicaid EHR Incentive Program will be confirmed once providers register for the program and meet eligibility criteria.

CHIPRA Quality Demonstration Project

The CHIPRA Quality Demonstration Project provides funding for SCDHHS to implement a demonstration project that will improve the quality of children's healthcare. SCDHHS and its grant partners propose to build a provider friendly continuous closed loop quality improvement structure. The CHIPRA Quality Demonstration Project will leverage resources from the HIE Cooperative Agreement Program and the Regional Centers Cooperative Agreement Program for the 18 participating pediatric practices. These practices will be able to share useful knowledge and lessons learned with the provider community concerning certified EHR use in the pediatric practice setting and collecting as well as reporting on quality measures.

SCDHHS has recruited a diverse group of practices that are spread across a continuum of EHR use and adoption, ranging from fully functional EHR users to practices that have not considered any HIT adoption. The practices without any near term plans for HIT adoption will be referred to CITIA for assistance. They will be able to share their experiences of working with CITIA with other providers that require HIT technical assistance.

The closed loop quality improvement structure will also serve, on a small scale, as a test model for the state when SCDHHS begins accepting quality measures and reporting electronically in 2012. The structure leverages the SCHIEx connection and the SCDHHS DSS data warehouse and returns quality reports to provider EHRs via SCHIEx.

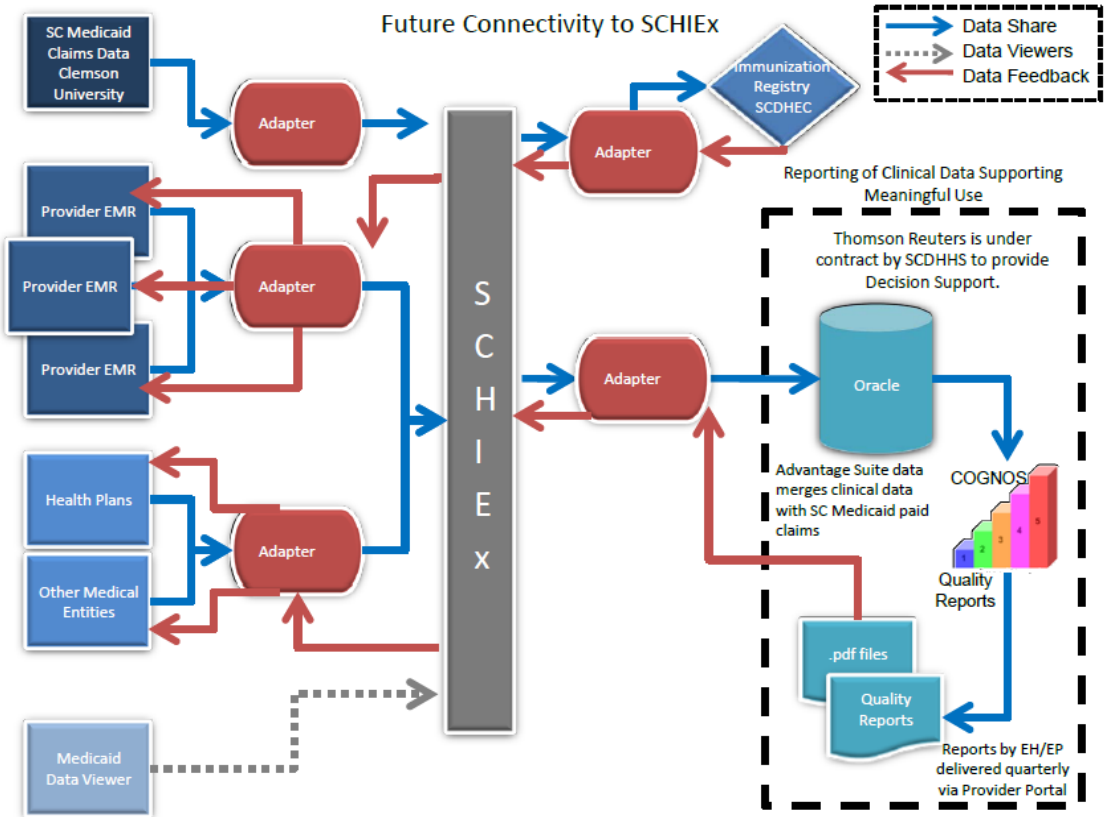
Pediatric Medicaid Population Impact

The HIE Cooperative Agreement, CHIPRA Quality Demonstration grant, and the South Carolina Medicaid EHR Incentive Program will address the impact of HIT, the adoption of certified EHR technology, and the pursuit of meaningful use on the pediatric Medicaid population. The HIE Cooperative Agreement will increase access of claims and other electronic data including immunizations to inform providers' care of patients. The CHIPRA Quality Demonstration Grant will provide lessons learned and experiences from implementing and using certified EHR technology to improve pediatric care. The South Carolina Medicaid EHR Incentive Program will reward providers for adopting certified EHR technology and achieving meaningful use. As these programs are administered by SCDHHS, the agency will be able to closely monitor their impact on the pediatric Medicaid population.

The Medicaid EHR (formerly known as EPHR) will also undergo modifications including the addition of clinical decision support components and messaging capabilities.

Clinical Data Repository

With the lessons learned from the quality reporting pilot, efforts are now focused on how to integrate structured data into the claims repository in order to build a clinical data repository. The diagram below lays out how SCDHHS envisions the potential future connectivity to SCHIEx that will also provider EMRs to directly pass data via SCHIEx to the Thomson Reuters Advantage Suite.



Provider EHR Adoption

Adoption Rates

In developing the sustainability model for SCHIEx, the South Carolina Department of Commerce also determined the estimated EHR and ASP EMR module adoption rates of providers. To estimate the adoption rate of providers, several sources of data were used including the environmental scan conducted by the SCRHRC; the results of a survey conducted by the American Hospital Association; and informal phone interviews with the Chief Information Officers of the largest hospitals in the state, conducted by SCDHHS staff.

Before estimating the number of SCHIEx users, the total market potential was determined. There are 9,379 physicians actively working in the state[1]. Approximately 2,200 of these are primarily employed at hospitals and the remainder at non-hospital locations. There are 2,235 nurse practitioners working in the state with approximately 70% employed at hospitals and 30% at other locations.[2] There are approximately 2,744 dentists working in South Carolina.[3] Because the expected adoption rates vary based on hospital and physician group or clinic size, the population of eligible users was divided using ratios calculated from the combined Medicaid provider files and licensure files.

A similar distribution was created for advanced practice registered nurses and dentists. Using the data from the environmental scan conducted in January of 2010, several scenarios of SCHIEx adoption were developed to provide a best estimate case and upper and lower bounds on SCHIEx adoption and consequent SCHIEx revenue. The best estimate adoption rate estimate is based on the portion of survey respondents indicating they will pursue ARRA incentive funds. The conservative (lower bound) case is the portion of respondents indicating they will pursue incentive funds and already have an EMR system in place. The optimistic (upper bound) case is based on the portion either definitely planning to pursue or uncertain about pursuing incentive funds. The table below provides the best estimate, conservative (lower bound), and optimistic (upper bound) expected SCHIEx adoption rates. These adoption rates are assumed to be reached in 2014.

	Small Hospitals (< 50 Beds)	Medium Hospitals (51 - 300 Beds)	Large Hospitals (300+ Beds)	Small Practice Groups / Clinics (<10 Eligible Users)	Large Practice Groups / Clinics (>10 Eligible Users)
Best Estimate Adoption Rate	67%	44%	50%	23%	55%
Conservative Adoption Rate	44%	22%	38%	12%	44%
Optimistic Adoption Rate	78%	66%	63%	58%	84%

Because there is limited data available to estimate dentist adoption rate, a very conservative approach was used to model revenue from this user group. The best estimate adoption rate for dentists was assumed to be 5% by 2014, conservative case was 0% and optimistic was 20%. Likewise, conservative estimates were used for ASP EMR module adoption. The best estimate adoption rate for the ASP EMR module solution is 10% of the small practice group population that is planning to pursue an incentive but not yet purchased an EMR solution. Of the entire small group population, this ratio is 3.6% for the

[1] SC Medical Board Certifications data, 2009
[2] SC Licensure File, via SC Office of Research and Statistics, March 2010
[3] American Dental Association, via Kaiser Family Health Foundation, 2008

best estimate case. The conservative case estimate is 0% adoption and the optimistic is 7.2% of the small practice group population.

A second detailed environmental scan was completed in June 2011 to update anticipated adoption rates.

Encouraging Provider Adoption

SCDHHS established marketing and provider education contracts to encourage provider adoption of certified EHR technology. The provider education contract launched an education campaign with promotional materials and participated in speaking engagements to provider associations and other professional organizations. Further, SCDHHS produces provider newsletters and bulletins to inform providers about the South Carolina Medicaid EHR Incentive Program.

SCDHHS will monitor adoption rates and adjust its communication strategy accordingly. Yearly estimates are broken down for HIT and certified EHR adoption in Section E of this document. In the mean time, SCDHHS will continue outreach efforts to providers, hospitals, professional associations, and health plans. SCDHHS will monitor adoption rates and adjust outreach efforts accordingly.

SCDHHS also relies on established relationships with provider organizations that are already using EHR technology and participating in a SCHIEx pilot project such as the LRHN to promote the use of EHR technology. The Carolina Health Centers, a member of the LRHN, participated in a pilot project with CareEvolution and Thomson Reuters to link claims and clinical data to produce quality reports via the SCHIEx connection. Pilot projects like these serve as demonstrations to the larger provider community of how HIE and certified EHR technology can be applied in the practice setting.

The Regional Extension Center will serve as central point of contact for their target population requiring technical assistance for adoption and meaningful use of certified EHR technology. SCDHHS and HSSC have been at the forefront of HIT activities within the state and continue to work closely as they implement their grants. For providers outside of CITIA's target population, SCDHHS is using a variety of methods to encourage adoption:

- **HIT website and Frequently Asked Questions**: SCDHHS maintains a website that lists many resources for providers regarding the incentive programs and a list of frequently asked questions.

- **HIT Summits**: The HIT summits are open to the public, and many providers have been engaged in the summit process since its inception. Past summits' resources and presentations are available on the HIT website.

- **Provider Bulletins**: SCDHHS relies on provider bulletins to communicate critical information to the provider community at large. A recent bulletin was distributed that contained information

on CITIA. Future bulletins and provider newsletters will include additional information on the South Carolina Medicaid EHR Incentive Program.

- **AHEC Regional Meetings**: Part of the communication strategy included regional meetings that providers attended to learn valuable information about HIT, certified EHR technology, meaningful use, and the incentive programs.

Interaction with MMIS and MITA

MMIS Replacement Project

A new MMIS will be implemented and ready for use in 2015. The new system will modernize many agency processes reducing the number of processes dependent on manual efforts and paper-based methods. The new system will feature SOA. By using SOA, SCDHHS should eliminate the need for the weekly data feed to ORS that populates the Medicaid viewer in SCHIEx. The data will always be available to ORS, as needed. The Medicaid EHR viewer will also be available to all Medicaid providers.

Clinical Data Repository

Plans for a clinical data repository that will house data on all Medicaid beneficiaries are under development. Initial work to develop this repository is included as part of the CHIPRA Quality Demonstration Project. However, additional resources will be required to scale out the repository to house data on the full Medicaid population.

Coordination with the South Carolina Medicaid EHR Incentive Program

The new MMIS will continue to support the credit adjustment process for the South Carolina Medicaid EHR Incentive Program. Though requirements for the new MMIS are not finalized as of yet, SCDHHS anticipates that the new MMIS will reduce manual processes for the HIT Division such as verifying that providers meet eligibility requirements such as enrollment in Medicaid, patient-volume, and hospital-based exclusions.

Section C: The HIT Roadmap

Major Activities and Milestones

As South Carolina already has a functioning HIE and demonstrated processes for collaboration, consensus, and decision making, the HIT strategic roadmap for South Carolina consists of filling in the gaps and planning for the future through the activities outlined below.

Date	Activity/Milestone	Related Initiative
2010		
1/2010	Completed detailed environmental scan	South Carolina Medicaid EHR Incentive Program
2/22/10	SCDHHS received CHIPRA Quality Demonstration Grant award	CHIPRA Quality Demonstration Grant
3/15/10	SCDHHS received HIE Cooperative Agreement award	HIE Cooperative Agreement
4/20/10	SCDHHS submitted final drafts of the strategic and operational plans to the ONC	HIE Cooperative Agreement
4/2010	AHEC provider educational campaign kick-off	South Carolina Medicaid EHR Incentive Program
5/2010	ORS and SCDHEC initiate work for the SCHIEx and immunization registry connection	HIE Cooperative Agreement
5/2010-7/2010	Recruit pediatric practices	CHIPRA Quality Demonstration Grant
5/17/10-5/28/10	Project Initiation: Validate proposed secure file transfer program (SFTP) data flows	HIE Cooperative Agreement
5/24/10-5/28/10	Project Initiation: Send and process test HL7 messages via email	HIE Cooperative Agreement
6/2010-8/2010	SCDHHS conducts search and hires HIT Division Director	Medicaid EHR Incentive Program
6/1/10-7/9/10	ORS and SCDHEC develop immunization registry interface • Set up SCHIEx test environment 6/1/10-6/4/10 • SCDHEC Internet-available test environment set up 6/11/10-6/11/10 • SFTP transaction configuration and testing 6/14/10-7/9/10 • Sending immunization records 6/14/10-6/25/10 • Query for immunization records 6/28/10-	HIE Cooperative Agreement

Date	Activity/Milestone	Related Initiative
	7/9/10	
6/30/10-7/31/10	Adapter Integration • Integration with State RLS 6/30/10-7/9/10 • Configuration of message triggers 7/12/10-7/23/10 • Sending immunization records 7/12/10-7/16/10 • Query for immunization records 7/19/10-7/23/10 • SCDHEC Internet-available production environment set up 7/16/10-7/16/10 • Configure and validation connectivity + authentication 7/19/10-7/31/10	HIE Cooperative Agreement
8/1/10-11/9/10	ORS and SCDHEC conduct testing and validation of SCHIEx and immunization registry interface	HIE Cooperative Agreement
8/2010	Submit SMHP to CMS.	South Carolina Medicaid EHR Incentive Program
8/18/10	SCDHHS and HSSC host HIT Summit 9	Supports all HIE initiatives
9/17/10	AHEC educational talk for the upstate region	South Carolina Medicaid EHR Incentive Program
10/12/10	Return completed CMS Data Use Agreement and Security Point of Entry Form for Group 1 States NLR testing.	South Carolina Medicaid EHR Incentive Program
10/13/10	AHEC educational talk for the mid Carolina region	South Carolina Medicaid EHR Incentive Program
10/29/10	Complete Group 1 States Connectivity Testing with CMS	South Carolina Medicaid EHR Incentive Program
11/5/10	AHEC educational talk for the PeeDee region	South Carolina Medicaid EHR Incentive Program
11/9/10	AHEC educational talk for the Lowcountry region	South Carolina Medicaid EHR Incentive Program
11/18/10	Summit 10 hosted	Supports all HIT initiatives
11/23/10	Submit operational plan and begin Implementation Phase	CHIPRA Quality Demonstration Grant
12/1/10	Finalize State Level Repository (SLR) Design and Development	South Carolina Medicaid EHR Incentive Program
12/15/10	Complete SLR Functional Testing	South Carolina Medicaid EHR Incentive Program
2011		
1/3/11	Public SLR Website “go live” date-registration only	South Carolina Medicaid EHR Incentive Program

Date	Activity/Milestone	Related Initiative
1/31/11	Public SLR Website "go live" date-registration and attestation	South Carolina Medicaid EHR Incentive Program
3/25/11	Begin making payments to EPs	South Carolina Medicaid EHR Incentive Program
4/1/11-5/31/11	Conduct second detailed environmental scan	South Carolina Medicaid EHR Incentive Program
7/31/11	ORS expects to complete NwHIN connection technical work	HIE Cooperative Agreement
1/1/11-1/31/11	Annual review of HIE strategic and operational plans	HIE Cooperative Agreement
6/1/11-6/30/11	Annual review of SMHP	South Carolina Medicaid EHR Incentive Program
7/25/11	Submit updated SMHP and IAPD	South Carolina Medicaid EHR Incentive Program
10/2011	Summit 11 to be hosted	Supports all HIT initiatives
2012		
1/1/12-1/31/12	Annual review of HIE strategic and operational plans	HIE Cooperative Agreement
6/1/12-6/30/12	Annual review of SMHP	South Carolina Medicaid EHR Incentive Program
7/25/11	Submit updated SMHP and IAPD	South Carolina Medicaid EHR Incentive Program
2013		
1/1/13-1/31/13	Annual review of HIE strategic and operational plans	HIE Cooperative Agreement
6/1/13-6/30/13	Annual review of SMHP	South Carolina Medicaid EHR Incentive Program
7/25/13	Submit updated SMHP and IAPD	South Carolina Medicaid EHR Incentive Program
2014		
3/14/14	Grant conclusion	HIE Cooperative Agreement
6/1/14-6/30/14	Annual review of SMHP	South Carolina Medicaid EHR Incentive Program
7/25/14	Submit updated SMHP and IAPD	South Carolina Medicaid EHR Incentive Program
2015		
2/21/15	Grant conclusion	CHIPRA Quality Demonstration Grant
6/1/15-6/30/15	Annual review of SMHP	South Carolina Medicaid EHR Incentive Program
7/25/15	Submit updated SMHP and IAPD	South Carolina Medicaid EHR Incentive Program

Provider Adoption

The baseline EMR adoption rates were supplied by the detailed environmental scan conducted at the close of 2009. The expected growth in adoption rates is based on the percentages of providers who have purchased EHR systems but not begun implementation and those providers who have begun actively planning to purchase EHR systems. The South Carolina Hospital Association anticipated that at least 10 hospitals would be ready to apply in early 2011 for the incentive program and expect another 15-20 for late 2011. A follow-up scan was conducted in April and May 2011, which assessed the change in HIT adoption rates, especially to certified EHR technology, and providers' interest and understanding in HIT. Estimated adoption rates will be adjusted as necessary. SCDHHS will project funding needs for the CMS 37 based on these adoption rates. Professional organizations will also supplement SCDHHS data with their readiness and predictions. Over time, SCDHHS will identify the adoption rates and improve forecasting its funding needs.

Provider Type	2010	2011	2012	2013	2014	2015
Practices (<10 providers)	46%	48%	53%	56%	58%	64%
Practices (>10 providers)	46%	54%	74%	82%	84%	90%
Hospitals (<50 beds, 23 total)	30%	43%	67%	76%	78%	88%
Hospitals (51-300 beds, 45 total)	30%	40%	57%	64%	66%	76%
Hospitals (301-500 beds, 8 total)	30%	39%	55%	61%	63%	73%

Technology

Technology Component	2010	2011	2012	2013	2014	2015
State Level Repository (SLR)	Develop SLR	Connect SLR to NLR				
MMIS	Legacy System					New MMIS
Clinical data repository in DSS	-Attestation -Leveraging CHIPRA grant	Build the EHR clinical data repository to collect clinical quality measures				-Claims and clinical data linked -Quality measures direct from EHR to DSS

Technology Component	2010	2011	2012	2013	2014	2015
HIE	-EHR Viewer access -Medicaid Claims Data	-Leverage CHIPRA grant for feedback -Add clinical messaging to facilitate outcomes				-EHR Viewer with clinical messaging available for use -Permanent legislation: any record, any time
ePrescribing	Access to eligibility and medication Rx hub through SureScripts					
Healthcare Reform	To be Determined					

Audit and Oversight Activities

Oversight Benchmarks

SCDHHS expects to streamline its processes for the South Carolina Medicaid EHR Incentive Program as more providers register for the program. Therefore, SCDHHS intends to review and adjust its program and SMHP, at minimum, annually. SCDHHS will also engage other stakeholders as necessary including CITIA, other state agencies, hospital associations, and other professional provider organizations to ensure that the program appropriately addresses stakeholder needs as much as possible.

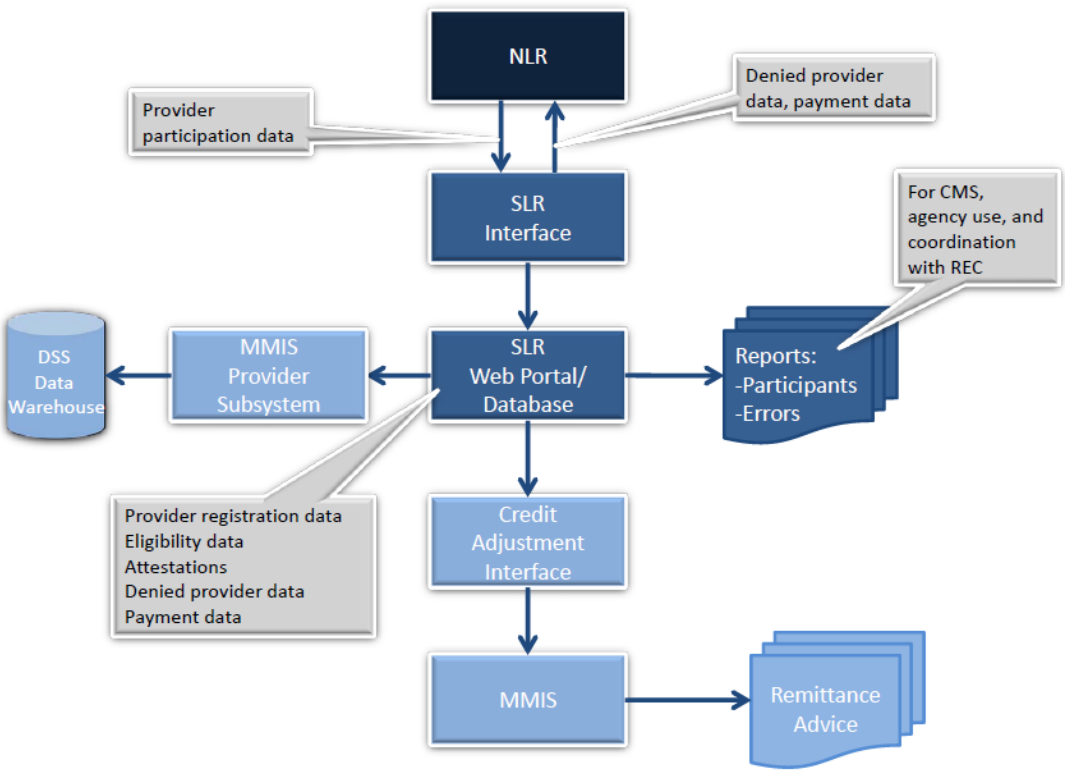
Audit Benchmarks

The SCDHHS Division of Audits will schedule a fixed number of audits annually, with priority given to audits of providers that meet certain criteria as described in Section E of this document. If no providers meet these criteria, then the number of random audits will be increased. It is difficult to determine the exact number of audits to be conducted since SCDHHS does not know how many providers will apply and be eligible for the EHR Incentive Program. However, the annual goal is to have audit coverage of each type of EP and one or two major hospitals. Further details on SCDHHS' audit strategy and benchmarks are in Section E.

Section D: Activities Necessary to Administer and Oversee the EHR Incentive Payment Program

In preparation for administering the South Carolina Medicaid EHR Incentive Program, SCDHHS has developed a framework for who will administer the payments, the tools and procedures needed, how providers will enroll and participate in the program, and the basic financial processes needed to oversee the program.

SCDHHS, the South Carolina Medicaid agency, will be fully responsible for the South Carolina Medicaid EHR Incentive Program and for making payments to EPs and EHs. SCDHHS will use a combination of existing technology and tools under development to effectively manage and monitor the program including the MMIS, DSS/SURS, the National Level Repository (NLR), and the State Level Repository (SLR). In order to pay out incentives properly, SCDHHS will forecast its cash needs, ensure providers are enrolled and meet incentive program conditions, calculate hospital payments, process and pay incentives as credit adjustments through the MMIS, report all expenditures, and monitor/audit the program to combat fraud and abuse. The diagram below is a high level depiction of what SCDHHS envisions is needed to administer and manage the EHR Incentive Program.



Program Administration

Assumptions and Dependencies

In order to effectively operate the South Carolina Medicaid EHR Incentive Program, the following assumptions and dependencies will drive the program's launch, administration, and oversight:

- SCDHHS launched the South Carolina Medicaid EHR Incentive Program in January 2011. In order to continue to operate its program, SCDHHS expects the CMS NLR will continue to transmit data concerning EPs and EHs who register for participation in the South Carolina program. The NLR is the "front door" for all providers, whether they participate in the Medicare or Medicaid EHR Incentive Program, and SCDHHS is dependent on the NLR interface to share provider registration data as well as data sharing for the duration of the program.

- SCDHHS expects that SCHIEx will be available as an option for providers to connect their certified EHR technology to. SCHIEx is currently used in several pilot projects and is being scaled out for statewide use under the HIE Cooperative Agreement. As of January 2011, SCHIEx is available for onboarding. Several SCHIEx documents have been developed (Policies and Procedures, the Business Associate Agreement, the Participation Agreement, and the Policy Manual Definitions) and are posted on the SCDHHS HIT website (http://www.scdhhs.gov/hit) and the SCHIEx website (http://www.schiex.org). The SCHIEx website also includes the Interoperability Services Guide, which details how providers will connect to SCHIEx. SCDHHS and ORS frequently communicate on the status of SCHIEx, and SCDHHS and ORS agree that SCHIEx will be a viable option for providers to connect to for the Medicaid EHR Incentive Program.

- SCDHHS expects that the connection between SCHIEx and the SCDHEC Immunization Registry will be available to providers to report immunization data. For providers who do not subscribe to SCHIEx, SCDHEC offers an alternative way to connect directly. SCDHHS and DHEC met and agreed to require meaningful use measure on immunization reporting as a meaningful use core requirement for the South Carolina Medicaid EHR Incentive Program. (Further information on this decision is available later in this section under State-Specific Meaningful Use Criteria). This Stage 1 measure requires EPs and EHs to do the following:

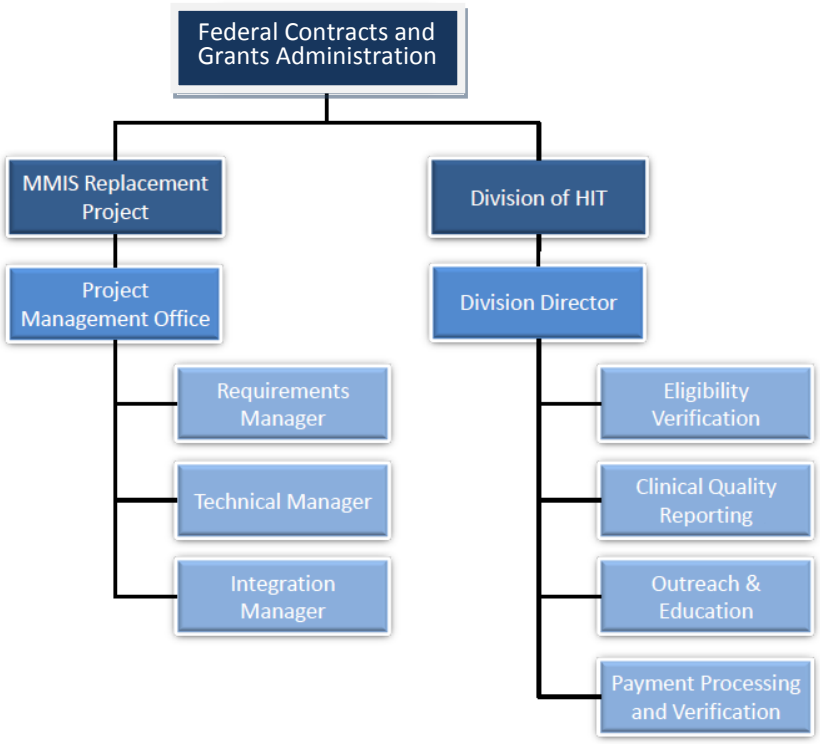
  > Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, EH, or CAH submits such information have the capacity to receive information electronically)

  ORS and DHEC have completed the test phase and are recruiting beta testers. This testing will be combined with the SCHIEx beta testing and will follow a similar schedule for completion. SCDHHS, ORS, and SCDHEC agree that the linkage between SCHIEx and the immunization

registry will be a suitable methodology for providers to share immunization data and meet the meaningful use requirement.

Staffing Support: Division of Health Information Technology

Staff for the MMIS replacement project and the South Carolina Medicaid EHR Incentive Program will be co-located in the Bureau of Federal Contracts and Grants Administration, as shown below. As planning and development efforts continue, it is essential that staff from these initiatives collaborate to effectively share resources and design solutions that address the needs of each project. SCDHHS will establish milestones for collaboration between the two project offices.

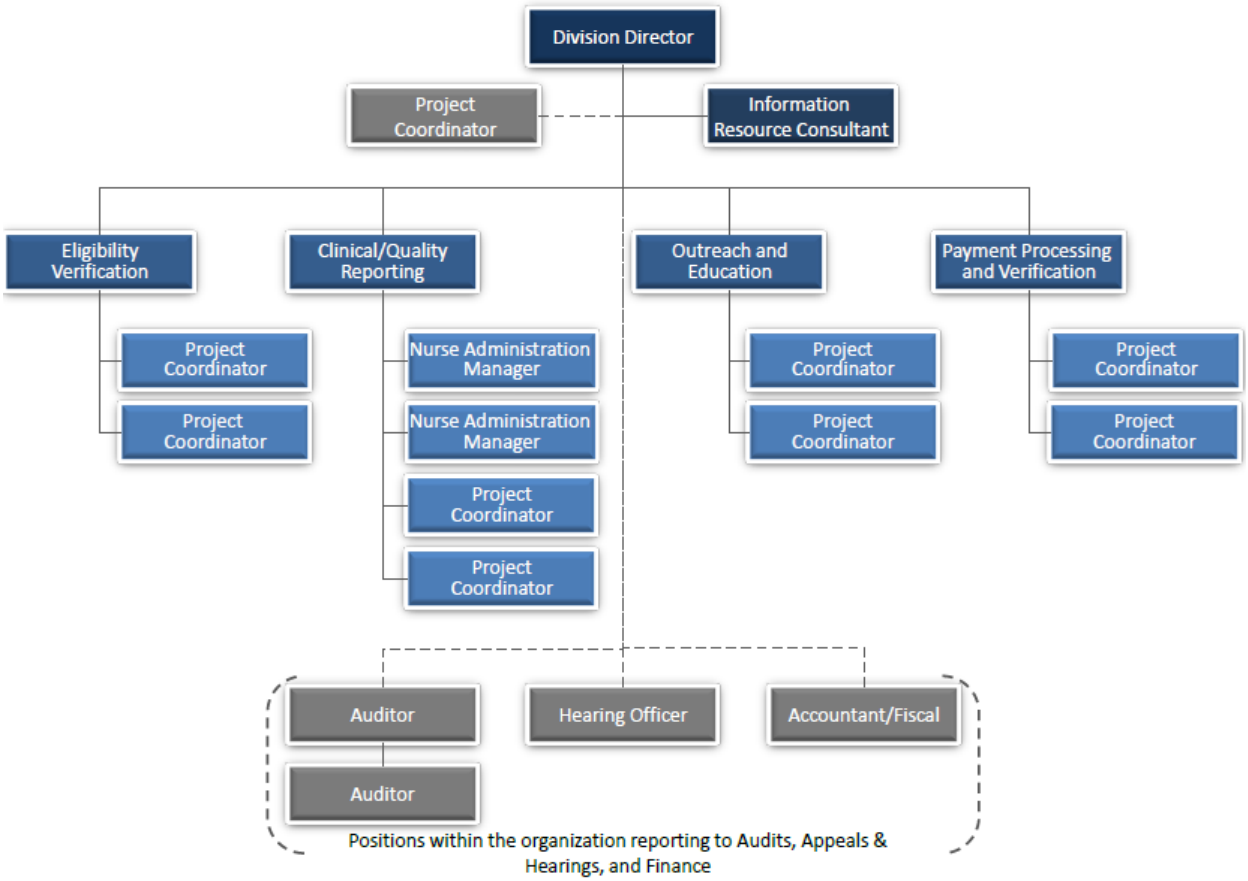


The core structure of the Division of HIT has been established with the intent that this organizational unit will evolve incrementally as functional needs become more apparent and as the program evolves. SCDHHS intends to leverage current contracts to procure clinical expertise in the area of quality reporting.

The Division of HIT is directly responsible for the South Carolina Medicaid EHR Incentive Program. The Division reports to the Bureau of Federal Contracts and Grants Administration under the Office of General Counsel. Functions of the Division will include: quality reporting both clinically and outreach focused; attestation; outreach and customer service; payment calculation, verification, and validation; financial reporting; appeals; and coordination with audit functions. Division responsibilities may also be extended to manage requirements of the HIE Cooperative Agreement Program.

The South Carolina Medicaid EHR Incentive Program will be approached in incremental steps and begin with a focus on receiving attestation data electronically. SCDHHS will leverage its medical directors and consider adding clinical staff as Medicaid providers move beyond adopting, implementing, and upgrading to certified EHR technology to approach meaningful use in Year Two of the program.

The Division will include 11 temporary grant positions and may be expanded or contracted as needed. Currently, the Division Director and two Project Coordinators have been hired. Other functions will be supported by staff located within various organizational units within SCDHHS including: the Bureau of Federal Contracts and Grants Administration, the Division of Audits, the Division of Appeals and Hearings, and the Bureau of Fiscal Affairs. These staff are listed in the gray boxes below.



Temporary grant positions must be established through the Office of State Budget, Budget and Control Board.

Position descriptions for each temporary grant position have been written including the minimum education, training, and experience requirements, job functions, ADA requirements, work schedules, etc. A joint task force formed by the American Health Information Management Association (AHIMA) and the American Medical Informatics Association (AMIA) has determined workforce core competencies for individuals working with EHRs.

Role of Medicaid Contractors

Though the South Carolina Medicaid EHR Incentive Program will be administered and overseen by internal SCDHHS staff, SCDHHS is coordinating with its existing contractors in order that they are informed of SCDHHS' plans for the program.

South Carolina's MMIS is unique in CMS Region IV in that it is a state-run system. Clemson University, a state university, through a contract with SCDHHS provides the system hardware, software, and staff to support the MMIS. South Carolina does not operate its Medicaid program with a Fiscal Agent. SCDHHS has and will continue to coordinate with Clemson University concerning the credit adjustment process for incentive payments and the interface between the SLR and NLR.

SCDHHS' Pharmacy Benefit Manager (PBM), First Health (Magellan Health Services), connects pharmacy data to SureScripts. South Carolina is one of seven states that have a connection to their prescription history to SureScripts. SureScripts is the software used by practice management systems in physicians' office when a script for a Medicaid patient is entered. The practice management systems contract with SureScripts for ePrescribing. SureScripts is the intermediary between the providers practice management software and First Health. This effort will continue to be valuable as providers meet the benchmarks of meaningful use.

SCDHHS' Decision Support Contractor, Thomson Reuters, completed a pilot project with CareEvolution and the Carolina Health Centers that allowed for clinical data to be passed through SCHIEx into the DSS and merged with claims data to produce quality reports. This effort will continue with the CHIPRA Quality Demonstration Grant, which focuses on the collection of CHIPRA quality measures, and the methods and best practices from the pilot project and the CHIPRA Quality Demonstration Grant may be applied on a larger scale for use with the entire Medicaid provider population.

Fiscal Oversight and Reporting

The SCDHHS Bureau of Fiscal Affairs will forecast the needed South Carolina Medicaid EHR Incentive Program funds via the CMS-37. Estimated funding for the incentive payments will be based on the anticipated provider adoption rates for physicians and hospitals. The environmental scan data provided these adoption rates. Professional organizations such as the South Carolina Hospital Association, SCPHCA, SCORH, and CITIA will also work with SCDHHS to share data on their anticipated adoption rates and predictions. Data from the CHIPRA grant will also be used. Over the duration of the program, these estimates will be adjusted as providers adopt certified EHR technology.

The MMIS will be the primary data source to track total incentive payments made as well as any overpayments. In the cases of suspected fraud and/or abuse, the Bureau of Compliance and

Performance Review may maintain data on incentive payments and recoupments in the event of overpayments.

Program Reporting

The HIT Division will be responsible for preparing and distributing all programmatic reporting related to the South Carolina Medicaid EHR Incentive Program. The Division Director will oversee the preparation of these reports and ensure their accuracy and completeness.

Information submitted to CMS annually includes:

- Reports on Adopt, Implement, Upgrade (AIU) of certified EHR technology
- Activities and payments
- Aggregated data on AIU, clinical quality measures
- Volume statistics on type, practice locations, providers who qualified for incentive payment
- Audit payment history from the NLR and SLR (which must be reconciled)

SCDHHS and REC Collaboration

SCDHHS and CITIA are collaborating to streamline communication by providing regular updates on their respective programs. A recent example of this collaboration was the development of an SCDHHS Medicaid provider bulletin on CITIA services. SCDHHS also includes an advertisement with every e-bulletin to encourage providers to contact CITIA for assistance. SCDHHS and CITIA will continue to look for opportunities to collaborate on provider communication. Regular meetings are held to address issues, barriers, and identify points of collaboration. More specific points of collaboration will be identified over time.

Medicaid IT Tools

Implementing the EHR incentive program requires a plan that integrates IT systems in addition to fiscal and communications processes that will be used to administer and oversee the EHR incentive payment program. The primary systems used to administer and execute the EHR incentive program include:

> **The CMS Registration and Attestation System, with the NLR** - a federal database that is the front door for EPs and EHs seeking incentive payments. SCDHHS was part of the Tier 1 testing group, which began testing at the close of October 2010.

SLR –an internally developed database designed to record registration, eligibility and attestation requirements and to interact with the NLR. The SLR is the main tool used by the HIT Division to oversee and administer the EHR incentive Program. The SLR captures state specific data elements and transmits payment and eligibility information back to the NLR. The SLR maintains basic data elements that are transferred from the NLR such as Tax Identification Number (TIN), the National Provider Identifier (NPI), CMS Certification Number (CCN) for an EH, EP type and affiliation. The SLR captures additional pertinent information from the EP/EH. EPs also enter if they are a current subscriber to SCHIEx. The SLR will also capture patient volume and attestation information.

MMIS – EHR incentive payments are processed as credit adjustments through the MMIS using existing functionality. MMIS maintains an audit trail of all payments.

DSS/SURS (Decision Support System/Surveillance and Utilization Review System)- will be adapted to receive data on meaningful use and clinical quality measures and house a clinical data repository. SCHIEx will be the conduit to receive clinical reporting data and pass it through an adapter connection to the DSS/SURS for reporting on meaningful use and clinical quality reporting. SCDHHS expects that the data capture will be dual purposed by providing a means for meaningful use attestation and compiling data for analytics to support the goals of improved coordination of care. This process is underway with the CHIPRA Quality Demonstration Grant and will prove useful in determining how to develop this for the larger provider community.

SCHIEx- is the state HIE, which is being scaled for statewide use under the HIE Cooperative Agreement. The South Carolina Legislature recently passed Proviso 89.120 (see Appendix B GP: Information Technology for Health Care) which addressed barriers to health information exchange and supports SCDHHS' requirement that providers connect to an HIE. Specifically, the Proviso allows SCHIEx participants to "release patient records and medical information, including the results of any laboratory or other tests ordered or requested by an authorized health care provider within the scope of his or her license or practice act, to another health information organization that requests the information via an HIE for treatment purposes with or without express written consent or authorization from the patient." The Proviso further states that "A health information organization that receives or views this information from a patient's electronic health record or incorporates this information into the health information organization's electronic medical record for the patient in providing treatment is considered an authorized person for purposes of 42 C.F.R. 493.2 and the Clinical Laboratory Improvement Amendments."

The SLR is the front door to the South Carolina Medicaid EHR incentive program for EPs and EHs. The web portal is a mechanism to allow EPs and EHs to enter the attestation information pertaining to eligibility, AIU, and meaningful use. This portal also serves as an interface to the NLR. The NLR transfers data via batch file transfer and allows SCDHHS to obtain data from the NLR as well as to send updates to the NLR with pertinent information regarding EPs, EHs, and status of their current attestation. The web

form is the mechanism to supplement the data in the NLR to capture the additional data elements needed by SCDHHS to authorize a Medicaid incentive payment.

Interaction with the NLR

SCDHHS worked closely with CMS in support of the development of the NLR. SCDHHS developed its SLR internally. SCDHHS was part of the Tier 1 testing group, which began testing at the close of October 2010.

The SLR is designed to communicate EHR incentive program registration data with the CMS NLR. The process for a provider registering for the incentive payment begins at the NLR where they will provide basic registration data. The EP/EH registers in the NLR and enters the following data elements:

- EP/EH Name
- NPI
- Business address
- Phone number
- TIN – to which the incentive payment will be made for EP/EH
- Indicate choice of Medicare or Medicaid incentive (EHs can receive both incentives)
- State selected to receive incentive from
- CCN for the EH

Once that data is confirmed by CMS, the data is shared with states and uploaded into the SLR. The NLR sends registration information to the SLR via a batch file transfer. On the log in screen of the SLR, the relationship between the NLR and the SLR is explained.

Creating an Account

When a provider visits the SLR website after registering with the CMS Registration and Attestation System, they create an account by providing the NPI, CMS Registration ID, and the e-mail address intended for use as the username. The NPI and CMS Registration ID are authenticated against data provided from the NLR/SLR file B6 transaction. .

Upon successful registration, the SLR responds to the provider e-mail address with a system generated temporary password. Once they've received the temporary password, a provider can then log into the SLR. They are prompted to change their temporary password to a permanent password when they log in successfully the first time.

Logging into an Account

Once a provider has confirmed their email address they will be able to log into the SLR anytime by providing the email address and password on the initial screen. Unsuccessful access attempts are monitored, and an account is automatically locked after three unsuccessful login attempts.

NLR Information Verification

The SLR Main Menu is divided into sections using a Navigation Menu. The "SLR Account Information" section is an area to view and confirm data received from the NLR. If the provider identifies any of this pre-populated data as incorrect, the provider is instructed to return to the NLR to modify any NLR data.

Workflow

The site is designed to make it easy for a provider to enter data in any section at anytime and save individual sections. For example, if a provider completes the "Confirm NLR Data" section, saves it and then exits the system, the provider can return at a later time and complete their application at any time. When the provider has completed all modules in the SLR website (eligibility, attestation of AIU/meaningful use, certified EHR technology), the provider will review their attestation, agree to an Attestation Statement, and submit their attestation for review by the HIT Division.

Provider Eligibility

The eligibility screens of the SLR are described later in this document under the Provider Eligibility Section.

For each new payment year, the EP is required to review and confirm the data in the NLR and SLR. The HIT Division also reviews eligibility attestation annually and tracks the review date for audit purposes.

At any point, the NLR may send data updates to the SLR regarding the EP's and EH's registration status; for instance, an EP may switch from the Medicaid Incentive Program to the Medicare Program or may choose to receive the incentive from another state.

NLR Interface Security

South Carolina contracts with Clemson University for the operation, maintenance, and support of its MMIS and Medicaid Eligibility Determination System (MEDS). In this role, Clemson already uses Connect Direct to securely transmit and receive Protected Health Information (PHI) with the Social Security Administration, Department of Defense, and other federal agencies. The Clemson University file transfer protocol (FTP) site accepts files containing registration data for South Carolina Medicaid providers from the NLR via a mainframe to mainframe interface using Connect Direct. Data received into the Clemson FTP site is then imported into a SQL database (SLR) at SCDHHS via the Virtual Private Network (VPN). Incentive payment transactions also traverse the VPN as payments are made through the MMIS.

SLR Infrastructure Security

The server hosting the SLR is a part of the SCDHHS technology infrastructure. As such, it is in a physically secure environment (card access for limited IT staff), and behind redundant firewalls. SCDHHS IT Security Policy requires that all servers be kept up to date with regard to security patches and anti-virus protection. The SLR server is also subject to intrusion prevention and detection monitoring 24 hours a day, 7 days a week.

Provider Communication and Tools

Provider Inquiries

Providers with questions concerning the South Carolina Medicaid EHR Incentive Program may either contact the HIT Division directly via telephone or submit questions to the dedicated email address for the program (hitsc@scdhhs.gov). Several HIT Division staff share the responsibility of addressing provider inquiries. As SCDHHS begins to receive more questions from providers, a series of "Frequently Asked Questions" pages will be developed for the HIT website (http://www.scdhhs.gov/hit) as another resource for providers.

SLR Website

Providers access the SLR via the web (http://www.scdhhs.gov/slr). This proprietary website is secured with Secure Sockets Layer (SSL) encryption. The HIT website (http://www.scdhhs.gov/hit) includes a link for providers to access the SLR website. Once a provider registers with the CMS Registration and Attestation System, the SLR website is the sole site a provider must access and enter data in for the South Carolina Medicaid EHR Incentive Program. As part of SCDHHS' provider outreach campaign, SCDHHS encourages providers to enter their email addresses in the CMS system (this is an optional field) in order that SCDHHS can maintain electronic communications with providers and reduce hard copy and manual processes. SCDHHS also uses email addresses to confirm SLR registration and communicate other related messaging to providers.

Provider Eligibility

Every EP and EH must first register in the CMS Registration and Attestation System. Basic data elements are collected at the federal level and then passed on to South Carolina's SLR. The SLR accepts data from the NLR, and transmits data to the NLR, through batch file transfer. Providers enter additional data elements into the SLR via a web portal to attest to patient volume, hospital-based status, and attestation of AIU/meaningful use of certified EHR technology.

An EP may attest for a payment year's incentives up until February 28 or 29 of the following calendar year; e.g., an EP could submit an attestation for 2011 incentives up until February 28 or 29 of 2012.

An EH may attest for a payment year's incentives up until November 30 of the following fiscal year; e.g., an EH could submit an attestation for 2011 incentives up until November 30, 2011.

Provider Enrollment Requirements

SCDHHS is requiring EPs and EHs to be enrolled in the South Carolina Medicaid Program. In order to participate in the Medicaid program, a provider must meet all of the following requirements:

- Licensure by the appropriate licensing body, certification by the standard-setting agency, and/or other pre-contractual approval processes established by SCDHHS (Note: Indian Health Services (IHS) provides are not required to be licensed).
- Enrollment in the South Carolina Medicaid program
- Obtain an NPI and share it with South Carolina Medicaid
- Continuously meet South Carolina licensure requirements of their respective professions or boards in order to maintain Medicaid enrollment

The Medicaid Claims Control System (MCCS) contractor manages provider enrollment and disenrollment for the South Carolina Medicaid program. MCCS maintains a proprietary system for tracking provider enrollment and verifies all information collected. During enrollment, providers are also manually checked against the Office of the Inspector General (OIG) exclusion list and South Carolina specific exclusion lists. Providers enrolling in Medicaid must also complete a Disclosure of Ownership and Control Interest Statement, and all names listed in the disclosure form are checked against the exclusion lists.

For purposes of treating Medicaid patients, it is not required for managed care providers (who do not participate in the fee-for-service Medicaid program) to enroll with South Carolina Medicaid. However, as stated above, a provider must be enrolled in the South Carolina Medicaid program to participate.

SCDHHS does not credential fee-for-service providers. However, to ensure that providers are licensed, SCDHHS checks the applicable state licensure board or the authorized approving entity such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), etc. In addition, if SCDHHS cannot verify a license, SCDHHS requests a copy of a current, valid license.

South Carolina managed care plans initially credential providers upon enrollment with the managed care plan and then re-credential providers every three years. Also, to enroll with a managed care plan, providers must be licensed in accordance with the South Carolina Department of Labor, Licensing and Regulation (LLR).

Both the existing policies and procedures and the planned future state for the MMIS and the South Carolina Medicaid EHR Incentive Program ensures that provider licensure will tracked, monitored, and audited as needed. A prerequisite for applying for an EHR incentive payment is to be an enrolled Medicaid provider. Incentive payments will only be made to providers who are properly licensed and enrolled.

Eligibility Criteria for EPs

Provider Type: EPs for the South Carolina Medicaid EHR Incentive Program include physicians, dentists, certified nurse midwives, nurse practitioners, and physician assistants (PA) in a FQHC or RHC that is "so led" by the PA. "So led" is defined as: (1) the PA is the primary provider in a clinic (2) the PA is a clinical or medical director at the practice (3) the PA is an owner of the FQHC or RHC. SCDHHS has collaborated with the South Carolina Office of Rural Health (SCORH) and the South Carolina Primary Healthcare Association (SCPHCA) in order to identify the PAs who are eligible in South Carolina. For purposes of the incentive program, SCDHHS includes optometrists as physicians as the South Carolina State plan specifically provides that the term "physicians' services" includes services of the type which an optometrist is legally authorized to perform.

For physicians who are attesting to the patient volume exception for pediatricians with a reduced Medicaid patient volume threshold, the HIT Division verifies that the physician is listed in the MMIS with a provider type 20 (physician) with a pediatric subspecialty (code 40, 41, 42, 68, or 49). If a provider is unsure if he/she is enrolled as a pediatrician with the South Carolina Medicaid program, he/she may contact provider enrollment.

The table below identifies licensure requirements that providers must meet in order to be licensed by the South Carolina LLR. Providers must be licensed by the South Carolina LLR to enroll with the South Carolina Medicaid program. The provider types listed below are the EP provider types for the South Carolina Medicaid EHR Incentive Program based on licensure requirements and scope of practices defined under State law.

An outreach campaign on the requirement for providers to be enrolled with South Carolina Medicaid will be extended to RHC and FQHC leaders, professional associations, and managed care plan providers via Medicaid provider bulletins.

South Carolina Licensure Requirements
Physician:

South Carolina Licensure Requirements

• Submit a completed application to the South Carolina Department of LLR
• Education requirements:
  o Graduated from a medical school located in the US or Canada that is accredited by the Liaison Committee on Medical Education; or
  o Graduated from a school of osteopathic medicine located in the US or Canada that is accredited by the Commission on Osteopathic College Accreditation; or
  o Graduated from a medical school located outside the US or Canada that possesses a permanent Standard Certificate from the Education Commission on Foreign Medical Graduates
• Post-Graduate training requirements:
  o Graduates of medical or osteopathic schools located in the US or Canada must document the completion of a minimum of one year of postgraduate medical residency training
  o Graduates of medical schools outside of the US or Canada must document a minimum of three years of progressive postgraduate medical residency in the US
• Examination Requirements
  o All parts of the National Board of Medical Examiners Examination in approved sequence
  o All parts of the National Board of Osteopathic Medical Examiners Examination
  o Federation Licensing Exam (FLEX)
  o United States Medical Licensing Examination (USMLE)
  o Medical Council of Canada Qualifying Examination (MCCQE) in approved sequence
  o Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA)
  o Written state examination of another state medical, osteopathic, or composite board prior to 1976 and current certification by a specialty board recognized by the American Board of Medical Specialties
  o Special Purpose Examination or the Composite Osteopathic Variable Purpose Examination
• Personal interview with a board member or the full board

Optometrist:
 	
• Submit a completed Application for Examination and Licensure in Optometry to the S.C. Board of Examiners in Optometry
• Graduated from a Council on Optometric Education accredited school and receive an O.D. degree
• Complete and pass the S.C. Board of Examiners in Optometry Jurisprudence Examination
• Licensure by Credentials Requirements:
  o National Board of Examiners in Optometry (NBEO) scores showing passage of Part I, Part II, Part III, and the Treatment and Management of Ocular Disease Examination (TMOD)
  o Verification of licensure from all states in which the Optometrist has ever held a license to practice optometry, including documentation of military service
• Licensure by Endorsement Requirements:
  o Currently hold an active and unrestricted license to practice optometry in another jurisdiction that includes authorization by law to treat glaucoma.
  o Actively practice optometry at the therapeutic level for the past 12 or 24 months out of the 36 months immediately preceding this application
  o Verification of licensure from all states in which the Optometrist has ever held a licensure to practice optometry, including military service. TPA licensure must also be report on current practice state's verification

South Carolina Licensure Requirements
○ Submit proof of passage of a practical examination that was required for licensure in another state ○ If applicable, have the National Board of Examiners in Optometry (NBEO) report examination scores directly to the Board office
Dentist: • Submit a completed application to the South Carolina Department of LLR • Graduated from a dental program accredited by the American Dental Association (ADA) • Successful completion of a Board-approved clinical dental licensure examination • Successful completion of the National Board Examination • Successful completion of the South Carolina jurisprudence examination • Personal interview with the Board, if requested
Certified Nurse Midwife: • Submit a completed application to the South Carolina Department of LLR • Verification of original state licensing examination • Competency Requirement (must complete at least one item from list below): ○ Completion of 30 contact hours from a continuing education provider recognized by the Board ○ Maintenance of certification or re-certification by a national certifying body ○ Completion of an academic program of study in nursing or a national field ○ Verification of competency and the number of hours practiced as evidenced by employer certification on a form approved by the Board
Nurse Practitioner: • Submit a completed application to the South Carolina Department of LLR • Verification of original state licensing examination • Competency Requirement (must complete at least one item from list below): ○ Completion of 30 contact hours from a continuing education provider recognized by the Board ○ Maintenance of certification or re-certification by a national certifying body ○ Completion of an academic program of study in nursing or a national field ○ Verification of competency and the number of hours practiced as evidenced by employer certification on a form approved by the Board
Physician Assistant: • Submit a completed application to the South Carolina Department of LLR • Complete educational program for physician assistants approved by the Commission on Accredited Allied Health Education Program • Successful completion of the NCCPA certifying examination and documentation that the individual possesses a current and active NCCPA Certificate • Appear before a Board member or designee with the supervising physician and all original diplomas and certificates • Successful completion of an examination on the statutes and regulations regarding physician assistant practices and supervision

Practice Location: EPs at FQHCs and RHCs must meet the practice predominantly criteria (more than 50% of the EP's encounters over a period of six months occurs at an FQHC or RHC) for an incentive payment. The SLR requires EPs attesting to needy patient volume to provide the names of the FQHC(s) or RHC(s) that the EP is affiliated with. The Division of Audits will include in their audit plans to audit that EPs at FQHCs and RHCs meet the practices predominantly requirements by using Medicaid claims data. It is important to note that the Catawba Indian Nation clinic is reimbursed as an IHS clinic and is therefore not treated as an FQHC. However, EPs at the Catawba Indian Nation clinic may qualify for incentive payments by reporting Medicaid or needy patients in the numerator of their patient volume calculations.

Hospital-based Status: To qualify as an Eligible Professional under the Medicaid EHR Incentive Program, a provider may not be "hospital-based," defined as any provider who furnishes 90% or more of his or her professional services in a hospital setting (inpatient, Place of Service 21; or emergency room, Place of Service 23) in the year preceding the payment year. The statutory definition of hospital-based EP provides that to be considered a hospital-based EP, the EP must provide "substantially all" of his or her covered professional services in a hospital setting. "Services" does not mean "encounters" as defined for the EHR Incentive Program.

It is important to note that if an EP "practices predominantly" in an FQHC or RHC, the EP is not subject to the hospital-based exclusion. An EP who attests to needy patient volume is also attesting that they practice predominantly in an FQHC or RHC. Therefore, an EP who attests to needy patient volume is not subject to the hospital-based exclusion. For these EPs, the HIT Division does not perform a pre-payment review of "hospital-based" or "practices predominantly". However, the SCDHHS reserves the right to validate a provider's hospital-based status attestation along with other attestations through post payment audits.

Where the physician or certified nurse midwife attests to Medicaid patient volume, the HIT Division will validate an attestation of not being hospital-based by examining fee-for-service and encounter claims by servicing provider for all visits, all hospital visits, and all emergency room visits from the previous calendar year to determine if the provider's claims activity indicates hospital-based status. However, since a nurse practitioner may file claims under another provider's NPI, a claims-based report by servicing provider is not an accurate reflection of the nurse practitioner's services.

Physicians and certified nurse midwives: Place of Service (POS) 21 and 23 codes are used to develop a report, by calendar year, to validate non-hospital-based status for physicians and certified nurse midwives. The criteria for the hospital-based EP report are as follows:

- Date of Service = 01/01/2010 to 12/31/2010 (dos from previous CY)
- Servicing Provider Type = 32 (Osteopathy), 33 (Opticians), 20 (Physician Individual), 19 (Medical Professional)
- Fee for service and encounter claims included
- Voids and deleted lines removed

- Inpatient hospital and emergency room place of services identified using the 2-byte POS codes of “21” and “23”

The report shows the following fields:

- Provider ID, NPI, Provider Name,
- Provider Type, Primary Specialty,
- Total All Visits
- Total hospital inpatient and ER visits
- Total record count
- Total IP and ER record count
- % IP/ER visits
- % IP/ER record count

Nurse practitioners: As the claims-based report does not provide a good picture of whether this provider type provides substantially all services in a hospital setting, SCDHHS will use alternative means to analyze their hospital-based status. The HIT Division will request that these EPs provide a statement of employment from the EP’s employer(s) for whom the EP provided professional services in the previous calendar year, on the employer's letterhead, that describes the terms of the EP’s employment during the calendar year, including date of hire, full-time/part-time, and if part-time the number of hours per week. The letters should be addressed to the S.C. Medicaid EHR Incentive Program and signed by the appropriate Human Resources authority within the employer’s organization. Upon receipt of this information, the HIT Division will make a determination of the nurse practitioner’s hospital-based status.

Dentists: The HIT Division does not verify hospital-based status on these professional types, as dentists would not perform substantially all of their services in an inpatient or emergency department setting.

Physician Assistants: Physician Assistants are eligible to participate in the Medicaid EHR Incentive Program when they are practicing in an FQHC or RHC that is PA-led. The HIT Division will rely on information provided by the South Carolina Office of Rural Health, and the South Carolina Primary Health Care Association, to verify that a PA is not hospital-based.

Patient Volume: SCDHHS opted to use the two options listed in the final rule. SCDHHS has a fee-for-service Medicaid and managed care model, so SCDHHS aims to support providers in the most flexible way for determining patient volume by making both patient volume calculations available. The first option (fee-for-service option) uses all patient encounters attributable to Medicaid during a 90-day period in the most recent calendar year prior to the year of reporting. The second option (managed care option) uses the total Medicaid patients assigned to the EP, with at least one encounter taking place during the calendar year preceding the start of the 90-day period, plus unduplicated Medicaid encounters in the same 90-day period. For a listing of South Carolina managed care plans that participate in the Medicaid program, please refer to the EH Eligibility Criteria patient volume section.

SCDHHS allows EPs to include encounters from out-of-state Medicaid recipients when calculating patient volume. To calculate patient volume using this option, the EP would add out-of-state Medicaid encounters to in-state Medicaid encounters for the numerator, and add out-of state total patient encounters to in-state total patent encounters for the denominator. As with all other data to which EPs attest, EPs must be able to supply an auditable data source that supports their calculations.

Option One Formula:

$$\frac{\text{Total Medicaid encounters in any representative continuous 90 day period in preceding calendar year}}{\text{Total patient encounters in the same 90 day period}} \times 100$$

Option Two Formula:

$$\frac{\left(\text{Total Medicaid patients assigned to the provider in any representative continuous 90 day period in the preceding calendar year, with at least one encounter taking place during the calendar year preceding the start of the 90 day period}\right) + \left(\text{Unduplicated Medicaid encounters in the same 90 day period}\right)}{\left(\text{Total patients assigned to the provider in the same 90 day period, with at least one encounter taking place during the calendar year preceding the start of the 90 day period}\right) + \left(\text{All unduplicated encounters in the same 90 day period}\right)} \times 100$$

Pediatricians must only reach a 20 percent patient volume. Medicaid patients, patients enrolled in Medicaid MCOs, and dually-eligible beneficiaries are included in the calculation to determine that the threshold of patient volume has been met for the Medicaid incentive. "Needy individuals" (i.e. individuals in Medicaid or the Children's Health Insurance Program (CHIP), individuals receiving uncompensated care, or individuals receiving care at no cost or reduced cost based on a sliding scale) are included in the calculations for EPs practicing predominantly at FQHCs and RHCs.

Providers in FQHCs or RHCs will be required to use cost reports or other auditable records to identify bad debt. Therefore, the provider is responsible for adjusting the uncompensated care individuals encounter information used in the calculation of the FQHC and RHC EP patient volume calculation to

account for bad debts when they file their initial and subsequent patient volume attestations. As with all other attestations, this information is subject to audit.

CHIP beneficiaries cannot be included in the calculation for Medicaid volume. Medicaid and CHIP beneficiaries utilize the same identification cards, so there is no way for a provider to distinguish which program a beneficiary is in. Providers have access to a table in the SLR that lists the percentage of CHIP encounters to total Medicaid encounters by county. Providers must use this as a resource to account for CHIP volume when attesting to their Medicaid patient volume.

The criteria for the CHIP impact report are as follows:

- Dates of Service (not paid dates) = 1/1/2010 through 12/31/2010 (dos from previous CY)
- Claim types "A" (professional claims) and "B" (dental claims) (Note: the five types of professionals eligible for Medicaid incentive payments are physicians, dentists, certified nurse midwives, nurse practitioners and physician assistants in an FQHC led by a PA. These professionals would use a claim type A to file claims; dentists use type B.)
- Both FFS and encounter (managed care) claims data included. This required the SUR analyst to pull data from MMIS for fee for service claims as well as from encounter data submitted by managed care organizations.
- County refers to the servicing provider who provided services in that county based on their place of business (not county of residence for the beneficiaries).
- Voids and deleted lines removed.
- One encounter equals all services rendered to a single patient by the same provider on the same day, which is roughly equal to claims at the header level.
- Determination of CHIP on the claim was based on logic that took into account eligibility category and a CHIP indicator.

The report shows the total number of Medicaid and CHIP encounters for the physicians practicing in each county, with the CHIP encounters expressed as a percentage. The EP Medicaid numerator encounters are reduced by the CHIP percentage for the county the EP is attesting from. For example, an EP that is a pediatrician practicing in Charleston County may calculate that he/she has a Medicaid patient volume of 31%. Since there is not a way for EPs to differentiate between Medicaid and CHIP patients, the pediatrician would refer to the reference table that is included in the SLR. For Charleston County, the percent of CHIP to total Medicaid encounters is 7.26%. When the pediatrician indicates Charleston County, the SLR reduces the count of Medicaid encounters by 7.26%, thus reducing the Medicaid patient volume to 28.8%.

Providers' volume attestations will be audited through the standard post payment audit process.

Per the final rule (see [495.306(h)]), clinics and group practices may opt to calculate the practice or clinic Medicaid or needy patient volume to offer to its EPs as a volume proxy under three conditions:

(1) The clinic or group practice's patient volume is appropriate as a patient volume methodology calculation for the EP (for example, if an EP only sees Medicare, commercial, or self-pay patients, this is not an appropriate calculation);

(2) there is an auditable data source to support the clinic's patient volume determination; and

(3) so long as the practice and EPs decide to use one methodology in each year (in other words, clinics could not have some of the EPs using their individual patient volume for patients seen at the clinic, while others use the clinic-level data)

If a clinic or group practice chooses this methodology for the patient volume calculation, an EP in that clinic or group may choose to use the clinic volume as a proxy for their own; or, the EP may choose to attest to his or her own individual patient volume, so long as their individual volume calculation only includes the EP's encounters that are not included in the clinic's volume calculation. The clinic or group practice is also required to use the entire practice's patient volume and not limit it in any way. SCDHHS has defined a group practice as a group of healthcare practitioners organized as one legal entity under one tax identification number (TIN).

An EP whose date of hire by a clinic/group falls after the 90-day period selected for the clinic/group patient volume calculation may utilize the clinic/group patient volume as a proxy for his or her own patient volume, as long as it is appropriate as a patient volume methodology calculation for the EP. For example, a newly hired EP who sees Medicaid patients may utilize the clinic's calculated Medicaid patient volume as a proxy for his or her own. Note: a newly hired EP may only utilize clinic needy patient volume if the EP meets the requirement of having practiced predominantly in an FQHC or RHC (as determined by practice activity in the previous calendar year).

The Division of Audits will use the MMIS as its primary resource for verifying patient volume. Both random and targeted audits will be conducted to verify the patient volume data to which EPs attest.

Eligibility Criteria for EHs

Provider Type: Hospitals eligible for the incentive program include acute care hospitals and CAHs (CCNs in the series 0001 through 0879 or 1300 through 1399) and children's hospitals (CCNs in the series 3300 through 3399). There are no free standing children's hospitals eligible for the Medicaid EHR Incentive Program in South Carolina.

An acute care hospital is defined as a health care facility where the average length of patient stay is 25 days or fewer and a CCN number (i.e. Medicare provider number) whose last four digits in the series run from 0001 through 0879 and 1300 through 1399.

A children's hospital is defined as a separately certified children's hospital with a CCN number (i.e. provider number) whose last four digits run from 3300 through 3399.

In order to validate the average length of stay requirement of 25 days or fewer for the acute care hospitals, SCDHHS' Bureau of Reimbursement Methodology and Policy will utilize the applicable statistics of worksheet S-3, Part I of the most recently filed South Carolina Medicare/Medicaid cost report.

Patient Volume: SCDHHS has selected the option listed in the final rule and is not proposing any alternative methods to calculate patient volume for EHs. The EH Medicaid patient volume threshold requires that EHs must have a minimum of 10 percent of all patient encounters attributable to Medicaid during a 90-day period in the most recent fiscal year prior to the year of reporting.

In order to calculate the volume, the following formula will be used:

> Total Medicaid patient encounters in any representative, continuous 90 day period in the preceding fiscal year divided by total patient encounters in that same 90 day period.

For purposes of this formula, the following definitions will apply:

1. A representative, continuous 90 day period is defined as three continuous calendar months chosen by the general acute care hospital that is representative of its normal operations. For example, if the selected period included a short term, one-time temporary Medicaid outreach program to meet the patient volume thresholds, then it would not support the volume calculation. Annual outreach events would still be representative.

2. For purposes of calculating the volume, the hospital must apply the following definitions of Medicaid encounters in its calculation, and include both inpatient and emergency department encounters:

    - A Medicaid encounter means services rendered to an individual per inpatient discharge where:

        - Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for all or part of the service; or

        - Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for all or part of the individual's premiums, co-payments, and/or cost sharing.

    - A Medicaid encounter means services rendered in an emergency department on any day where:

        - Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for all or part of the service; or

- Medicaid (or a Medicaid demonstration project approved under section 1115 of the Act) paid for all or part of the individual's premiums, co-payments, and/or cost sharing.

Qualifying Title XIX (Medicaid) eligible individuals will include both in-state and out-of state individuals covered/enrolled in the:

- Medicaid fee for service program (includes the Medical Home Network (MHN) enrollees);
  - South Carolina Medicaid MHN: South Carolina Solutions, Carolina Medical Homes, Palmetto Physician Connections
- Medicaid MCOs;
  - South Carolina Medicaid MCOs: First Choice by Select Health of South Carolina, United Healthcare Community Plan, Absolute Total Care, BlueChoice Health Plan of South Carolina
- Medicaid prepaid inpatient health plans (PIHPs);
  - There are no Medicaid PIHPs in South Carolina.
- Medicaid prepaid ambulatory health plans (PAHPs);
  - There are no Medicaid PAHPs in South Carolina.
- Medicaid Program of All Inclusive Care for the Elderly (PACE) Programs;
  - SCDHHS will require the hospitals that contract with the two PACE Programs operating within the state to provide the number of Medicaid inpatient hospital days served during the applicable hospital fiscal year end reporting period that will be used to determine the incentive payments to the qualifying hospitals.
- Medicaid with commercial insurance carrier; and
- Dual eligible (Medicaid/Medicare) individuals (including those individuals with claims where the Medicare paid amount exceeded the Medicaid allowed amount).

Hospitals must annually attest to meeting the volume requirement of ten percent (10%) in accordance with the methodology outlined above in order to continue eligibility in the South Carolina Medicaid EHR Incentive Program. Hospitals will be allowed to change their 90 day consecutive period each year as long as it is representative of its normal operations.

CHIP beneficiaries cannot be counted in the Medicaid volume. Medicaid and CHIP beneficiaries utilize the same identification cards, so there is no way for a provider to distinguish which program a beneficiary is in. EHs have access to a table in the SLR that lists the percentage of CHIP encounters to total Medicaid encounters by county. EHs must use this as a resource for determining their Medicaid volume. Providers' volume attestations will be audited through the standard audit process. The criteria for the hospital CHIP report are slightly different from the EP report:

- Last date of service = 10/01/2009 - 09/30/2010 (i.e., discharge date) (dos from previous FFY)

- Provider type “01” (inpatient hospital) and “02” with a facility revenue code like '*450','*459' (to designate emergency room)
- Both FFS and encounter (managed care) claims data included. This required the SUR analyst to pull data from MMIS for fee for service claims as well as from encounter data submitted by managed care organizations.
- County refers to location of hospital

For FY2011 Eligible Hospital attestations, the SCDHHS will employ the following procedures to verify the patient volume encounter data submitted by hospitals:

A. Hospitals will be required to submit the following summary encounter information using allowable inpatient discharges and ER visits as the basis for the three month (i.e. 90 day) period for both in state and out of state qualifying Medicaid eligibles. Upon notification of an EH submitted attestation, the SCDHHS will contact the EH representative to request completion of the SCDHHS HIT Volume Calculation Worksheet to separately identify the South Carolina Medicaid eligibles from the out of state Medicaid eligibles, and report the encounters by type SC Medicaid eligible. The EH representative will also be required to complete the worksheet entitled “HIT Hospital Worksheet” in order for the SCDHHS to ensure that all discharges reported can be included in the Medicaid patient volume calculation. Additional information may be requested as needed to validate the EH information with SCDHHS internal data. The SLR will include an adjustment to remove the estimated CHIP encounters from the Medicaid fee for service encounters.

    1. Medicaid Fee for Service Program;
    2. Medicaid MCOs;
    3. Medicaid PIHPs;
    4. Medicaid PAHPs;
    5. Medicaid PACE Programs;
    6. Medicaid with commercial insurance carrier (only discharges and ER visits where Medicaid paid for all or part of the service);
    7. Dual Eligibles (Medicaid/Medicare) individuals (should include all dual eligible discharges and ER visits billed to Medicaid since Medicaid either paid for all or part of the service via co-payments, cost sharing or up to the Medicaid allowed amount, or for $0 paid claims where Medicaid paid for all or part of the premiums);and
    8. Total encounters provided during the three month period.

B. Hospitals will be required to submit excerpts from their monthly Board Meeting Minutes or their monthly financial statements to support the total number of inpatient discharges and ER visits incurred during the three month period used for patient volume qualification as identified in section (A)(8) above. EHs will be required to submit this information directly to the S.C. Department of Health and Human Services, Division of Health Information Technology, P.O. Box

8206, Columbia, S.C. 29202-8206, along with the information described in the previous paragraph.

C. The SCDHHS will determine the number of SC Medicaid eligible encounters (i.e. inpatient discharges and ER visits) by using its MMIS paid claims data, its Medicaid MCO encounter data, and the CHIP exclusion adjustment factor percentage for the three month qualification period used by the provider to perform a reasonableness check on that data submitted by Medicaid EHs. In the event that the in house Medicaid MCO encounter data cannot be readily used to determine the total number of encounters incurred by the hospital for analysis purposes, the SCDHHS will seek this information from the applicable Medicaid MCO(s) and reconcile accordingly with the qualifying hospital.

D. The SCDHHS will use its CHIP adjusted SC Medicaid eligible encounter information provided via its claim payment system (MMIS) and its Medicaid MCO encounter data to determine if the hospital meets the patient volume requirement of 10% using SC Medicaid eligibles only. If the 10% patient volume requirement is met using this methodology, then no further analysis will be performed. However, if the 10% patient volume requirement is not met using the SC Medicaid eligibles data identified above, then the SCDHHS will request additional detail and perform various sampling techniques on the data submitted to determine the reasonableness of the out of state data submitted for the 10% patient volume eligibility determination.

EH Checklist

The Bureau of Reimbursement Methodology and Policy developed a checklist to assist EHs that are seeking incentive payments. This checklist was distributed through the SCHA to EHs:

Checklist for Hospitals Seeking Medicaid EHR Incentive Payments

- Has your hospital's fiscal year (HFY) end 2010 Medicare/Medicaid cost report been filed with the South Carolina Department of Health and Human Services (SCDHHS)?

- Does the total number of discharges reported on your HFY 2010 Medicare/Medicaid cost report (W/S S-3, Part I, Line 1, Columns 14 and 15) include newborn discharges as well as discharges relating to psych or rehab units (if applicable)? If the answer is yes, then please identify the total number of newborn discharges as well as the total number of psych discharges as well as rehab discharges.

- Has your hospital completed the "Patient Volume" page in the State Level Repository and met the minimum Medicaid Patient Volume requirement of ten percent (10%) for a consecutive ninety (90) day period which has been defined as three (3) consecutive calendar months incurred during 2010 FFY (federal fiscal year)?

- Assuming that your hospital meets the minimum 10% Medicaid patient volume requirement, we will need the following information in order to verify the statistical information used in the determination of your hospital's Medicaid Patient Volume percentage. **Your hospital is required to submit information described in A and B below directly to the SC Department of Health and Human Services, Division of Health Information Technology, P.O. Box 8206, Columbia, S.C. 29202-8206. Please mark your mailing envelope "EHR Qualification Data."**

    A. The hospital will be required to submit summary encounter information consisting of both inpatient discharges and ER visits as the basis for the three month (i.e. 90 day) period for both in state and out of state qualifying Medicaid eligibles using the format prescribed under the file named "HIT Volume Calculation." The summary encounter information should separately identify the South Carolina Medicaid eligibles from the out of state Medicaid eligibles and be reported by type SC Medicaid eligible (see list below). The SCDHHS State Level Repository will include an adjustment to remove the estimated CHIP encounter percentage from the Medicaid fee for service encounters.

        1. Medicaid Fee for Service Program;
        2. Medicaid MCOs;
        3. Medicaid PIHPs;
        4. Medicaid PAHPs;
        5. Medicaid PACE Programs;
        6. Medicaid with commercial insurance carrier (only discharges and ER visits where Medicaid paid for all or part of the service);
        7. Dual Eligibles (should include all dual eligible discharges and ER visits billed to Medicaid since Medicaid either paid for all or part of the service via co-payments, cost sharing or up to the Medicaid allowed amount, or for $0 paid claims where Medicaid paid for all or part of the premiums); and
        8. Total encounters provided during the three month period.

        Medicaid newborn discharges as well as psych and rehab discharges will need to be reported separately from Medicaid acute care discharges. Therefore, the hospital must complete the file named "HIT Hospital Worksheet" in order to ensure that all discharges reported can be included in the Medicaid patient volume calculation.

    B. The hospital will be required to submit excerpts from their monthly Board Meeting Minutes or their monthly financial statements to support the total number of inpatient

discharges and ER visits incurred during the three month period used for patient volume qualification as identified in section (A)(8) above. **All newborn discharges as well as psych and rehab discharges will need to be reported separately from acute care discharges (see file named "HIT Hospital Worksheet").**

C. The SCDHHS will determine the number of SC Medicaid eligible encounters (i.e. inpatient discharges and ER visits) by using its MMIS paid claims data, its Medicaid MCO encounter data, and the CHIP exclusion adjustment factor percentage for the three month qualification period used by the provider to perform a reasonableness check on that data submitted by the hospital. In the event that the in house Medicaid MCO encounter data cannot be readily used to determine the total number of encounters incurred by the hospital for analysis purposes, the SCDHHS will seek this information from the applicable Medicaid MCO(s) and reconcile accordingly with the qualifying hospital.

D. The SCDHHS will use its CHIP adjusted SC Medicaid eligible encounter information provided via its claim payment system (MMIS) and its Medicaid MCO encounter data to determine if the hospital meets the patient volume requirement of 10% using SC Medicaid eligibles only. If the 10% patient volume requirement is met using this methodology, then no further analysis will be performed. However, if the 10% patient volume requirement is not met using the SC Medicaid eligibles data identified above, then the SCDHHS will request additional detail and perform various sampling techniques on the data submitted to determine the reasonableness of the out of state data submitted for the 10% patient volume eligibility determination.

Once the Medicaid patient volume data has been received, the SCDHHS will initiate the calculation of the aggregate EHR incentive payment amount for your hospital (assuming that your hospital has met the 10% Medicaid patient volume requirement), and submit this payment information to you for review and attestation purposes.

For Participation Year FY2011 EH attestations, the SCDHHS Bureau of Reimbursement Methodology and Policy will prepare an Incentive Payment Calculation Worksheet that displays all of the data for an EH's aggregate payment calculation and will send that to the EH authorized representative. The worksheet will instruct the EH to verify the data; the EH will also be required to input information to differentiate charity care and bad debt. The EH representative must then return to the EH attestation in the S.C. Medicaid State Level Repository (SLR), enter the verified data into the aggregate incentive payment calculation fields, and re-submit the EH attestation. The EH must also upload documentation that supports the attestation of patient volume. Please note: For Participation Year 2012 and beyond, the SLR will offer the functionality such that an EH will upload the patient volume documentation, and attest to the aggregate incentive data, when first submitting an attestation.

EP and EH Data

The SLR gathers data elements needed to go back to the NLR. Different views will be shown depending on whether the user has been designated an EP or an EH; and, in the case of an EP, the decision tree selections of the EP pertaining to patient volume base (Medicaid or needy patient; individual or group volume), and volume calculation option (fee-for-service or panel).

Patient Volume

The patient volume section includes the needed data fields as well definitions for key terms and some policy guidance. The beginning and the ending dates are gathered so the system can run an automatic check on the date and verify some basic parameters.

Attestation of Adopt, Implement, Upgrade (AIU)

EPs and EHs must attest to AIU of certified EHR technology in their first payment year in order to be eligible for an incentive payment (provided the other eligibility criteria are met).

> **Adoption** is defined as acquisition, purchase, or secured access to certified EHR technology. This evidence would serve to differentiate between activities that may not result in installation (for example, researching EHRs or interviewing EHR vendors) and actual purchase, acquisition, or installation.
>
> **Implementation** is defined as the provider has installed certified EHR technology or has commenced utilization of certified EHR technology in his or her clinical practice. Implementation activities would include staff training in the certified EHR technology, the data entry of their patients' demographic and administrative data into the EHR, or establishing data exchange agreements and relationships between the provider's certified EHR technology and other providers, such as laboratories, pharmacies, or HIEs.
>
> **Upgrade** is defined as the provider moving from non-certified to certified EHR technology, or expansion of the available functionality of certified EHR technology.

The EP or EH must attest to the AIU of certified EHR technology, and retain evidence that demonstrates the EP/EH's legal or financial commitment to the AIU of certified EHR technology prior to the attestation. This evidence would serve to differentiate between activities that may not result in AIU (for example, researching EHRs, interviewing EHR vendors, contract proposals) and an actual commitment to the AIU. Documentation of the legal or financial commitment may include but is not limited to: an invoice and receipt for payment; purchase agreement; license agreement; binding contract (signed by both parties), etc. Should the documentation not specify the certified EHR technology product (product

name and version), a letter from the certified EHR technology vendor that clarifies the product name and version may be retained along with the documentation as a supplement; however, such a letter will not be regarded as stand-alone evidence of AIU.

Meaningful Use

Attestation of Meaningful Use

In their first year of participation in the Medicaid EHR incentive program, at minimum, Medicaid providers must attest to AIU. Medicaid providers who meet the Stage 1 meaningful use criteria will be able to attest to meaningful use in the SLR beginning early 2012. Dually eligible hospitals must meet meaningful use for the Medicare EHR Incentive Program in their first year of participation. In 2011, SCDHHS will only accept AIU attestations. SCDHHS is modeling its meaningful use attestation module in the SLR after the CMS Registration and Attestation System. EPs and EHs will attest to each measure in the SLR by entering numerator, denominator, and exclusion information. The format of the SLR site will allow for each measure to be displayed individually on a page. For measures that a provider meets the exclusion criteria, the provider will be able to attest to meeting the exclusion criteria in the SLR. Once an EP or EH completes the meaningful use attestation, the user will be directed to a summary screen of all attestation information. Each measure will have a "pass" or "fail" indicator based upon the information entered. In leveraging the format that CMS uses for Medicare meaningful attestations, SCDHHS hopes to provide a clear and easy to use process. Further, providers who switch from the Medicare Incentive Program to the Medicaid Incentive Program will have the benefit of using similar systems to attest to meaningful use. SCDHHS envisions a different approach for the longer-term and is working with its stakeholders to identify a solution that will lessen the provider burden to submit meaningful use data and leverage opportunities to collect other quality measures..

SCDHHS will be leveraging contract staff to make the necessary adjustments to the SLR. Testing of the updates will begin mid October 2011 and run through mid-November 2011. SCDHHS will launch a provider education campaign on the meaningful use attestation in early 2012 to ensure providers are informed of the upcoming changes. SCDHHS will update its SLR guides to include step-by-step guidance on the meaningful use attestation process.

Meaningful use attestations will be verified through a mix of pre- and post-payment activities. SCDHHS will work with DHEC and ORS to verify public health measures and connection to SCHIEx. As SCDHHS identifies other means of pre-payment verification, they will be included in the pre-payment verification activities. All other aspects of meaningful use attestations will be verified post-payment via audits.

State-Specific Requirement for Meaningful Use

The final rule on the EHR Incentive Program gives states the opportunity to require any of the four menu set public health measures as a core requirement for their Carolina Medicaid EHR Incentive Program. SCDHHS and DHEC met and agreed to require the meaningful use measure on immunization reporting as a core requirement for the South Carolina Medicaid EHR Incentive Program. This Stage 1 measure requires EPs and EHs to attest to the following:

> Performed at least one test of certified EHR technology's capacity to submit electronic data to immunization registries and follow up submission if the test is successful (unless none of the immunization registries to which the EP, EH or CAH submits such information have the capacity to receive information electronically)

Two significant factors contributed to SCDHHS' decision to include this meaningful use measure as a state-specific requirement:

> **Immunization Registry Readiness:** The immunization registry which is currently maintained by SCDHEC consists of both CARES, the history and analytics repository for registry, and IIS, the SCDHEC HL-7 Enabled IIS providing the messaging infrastructure. IIS meets the requirements of the CDC Implementation Guide for Immunizations Data Transactions, Version 2.2. It is capable of processing the standard transactions VXQ, VXR, VXX, and VXU.
>
> The project to connect the SCDHEC immunization registry, i.e., CARES and IIS, to SCHIEx is complete. The final result is a bi-directional interaction between SCHIEx and the immunization registry in 2011. The next step in the project is completing technical work to allow providers to print immunization certificates via the SCHIEx connection.
>
> **State Law to Establish Statewide Immunization Registry**: H*4446 was passed on June 1, 2010 and requires SCDHEC to establish a statewide immunization registry, to require health care providers to report the administration of immunizations to the department, and to provide civil penalties for violators. Accompanying regulations will be promulgated no later than 2012 and will recognize the transmission of immunization data from EHRs by means of SCHIEx to the immunization registry as the optimal solution. See Appendix C for the full text of the statute.

SCDHHS expects that the state requirement for providers to report the administration of immunizations to SCDHEC will be reasonable to achieve as the provider meets the required meaningful use criteria. However, SCDHHS has identified some potential provider barriers to this requirement including:

- Uncertainty of the code set providers will use when sending immunization data
- The need to modify business practices

SCDHHS, SCDHEC, and other stakeholders will collaborate on developing a communication plan to inform providers on this additional state-specific meaningful use measure. SCDHHS aims to keep its provider informed in advance of all decisions relating to the South Carolina Medicaid EHR Incentive Program.

Clinical Quality Reporting

For 2012, SCDHHS will accept attestations for clinical quality measures in the SLR via the meaningful use attestation module. For future years of clinical quality measures, SCDHHS will be developing a more detailed plan in the coming months in order to collect clinical quality measures. Currently, SCDHHS plans to study the work accomplished in the CHIPRA Quality Demonstration Grant and leverage its work. For CHIPRA grant participants, clinical quality measures, generated as output of a certified EHR, will be submitted via SCHIEx to the DSS. The DSS will store the clinical quality measure components (i.e. numerator, denominator, exceptions) as submitted by providers. This submission will utilize a standard format agreed to by suppliers of certified EHRs or a format supplied by SCDHHS. The retention of these summary measures in the DSS will facilitate the development of a quality measures baseline, forming a basis for comparison from which future progress may be compared. SCDHHS will engage its contractor, Thomson Reuters, to develop a solution for clinical quality reporting.

Thomson Reuters intends to combine clinical data with administrative and eligibility data in the DSS. This approach provides SCDHHS with enhanced capabilities for program management and population analytics including the following operational and analytic capabilities:

- Report on clinical data quality as EPs and EHs connect to the HIE
- Track the relationship between the quality of care and the cost of care
- Experiment with emerging clinical quality measures
- Identify data quality and program integrity issues by analytically linking clinical data to administrative data
- Enable analysis of Accountable Care Organizations / Programs
- Identify trends in population health
- Support patient-centric analytics (risk stratification, health assessment, episodic analysis)
- Perform ad hoc analyses in support of emerging issues & questions
- Quickly trigger early patient interventions indicated by clinical data

Incentive Payment Calculation and Processing

Conditions for Payment

Prior to SCDHHS making a payment to an EP or EH, certain conditions must be satisfied:

- At minimum, the provider must have adopted, implemented, or upgraded to certified EHR technology for payment year 1. A provider may choose to meet and attest to the Stage 1 meaningful use measures (or the applicable stage, depending on the program participation year) beginning 2012.
- Provider must not appear on the OIG (CMS will check this through the NLR) or South Carolina sanctions list. (SCDHHS will check this list. State-based sanctions apply insofar as they prohibit a provider from receiving federal money.)
- Provider must not have already received a payment from another state or South Carolina in the current program year.
- EPs must not have already received a payment from Medicare in the current program year.

SCDHHS began issuing incentive payments in March 2011 to providers that have met the program requirements.

When a provider is under suspicion of fraud, the provider's application is pended until further information is available concerning their standing as a Medicaid provider. If the provider is proven innocent, their application can be processed for payment if they meet all of the eligibility criteria. If the provider is proven guilty and is excluded from the Medicaid program, the provider will be excluded from participation in the incentive program until the exclusion expires.

Incentive Payments to EPs

Initially, Medicaid agencies were required to verify that an EP demonstrates "net allowable costs, contributions from other sources, and a 15% provider contribution in order to participate in the Medicaid EHR Incentive Program. However, as detailed in the State Medicaid Director's Letter dated April 8, 2011, the Medicare and Medicaid Extenders Act of 2010 now provides that an EP has met this responsibility, as long as the incentive payment is not in excess of 85% of the NAAC (this equals $21,250 for payment year one). The documentation originally required by an EP to demonstrate that he or she has contributed 15% of the NAAC is also no longer needed.

The HIT Division issues incentive funds by way of electronic credit adjustments processed by the legacy MMIS system. Each user that creates adjustments in the system has a unique ID for tracking purposes, and incentives are tracked with new fund codes. Payments are made via electronic funds transfer (EFT).As providers are determined eligible to receive payments, their incentive payments are incorporated into the weekly payment schedule within 45 days of receipt of the transaction from the

CMS NLR that denotes the provider's account as locked for payment (the D16Response). No incentive payments are disbursed through Medicaid managed care plans. The HIT Division notifies the provider of the payment via email. The SLR submits payment data to the NLR.

Payments under the Medicare and Medicaid EHR Incentive Programs are treated like all other income. The incentive payment legal authorities do not supersede any state or federal laws requiring wage garnishment or debt recoupment; therefore, if there is a legal basis for the state or federal government to net or recoup debts, such authority will apply to incentive payments, just as it applies to all other income. In addition, SCDHHS will suspend all Medicaid payments to a provider after the agency, in conjunction with the Medicaid Fraud Control Unit, determines there is a credible allegation of fraud. In situations where SCDHHS determines there is a credible allegation of fraud against a provider who otherwise has met EHR eligibility requirements, any pending EHR incentive payments would be withheld in accordance with agency policy.

Incentive Payments to EHs

The SCDHHS Bureau of Reimbursement Methodology and Policy will calculate each hospital's aggregate EHR incentive amount on the federal fiscal year to align with hospitals participating in the Medicare EHR incentive program. Therefore, each payment year will equate to the federal fiscal year. For purposes of administrative simplicity, CMS requires the Medicaid agency to use data on the hospital discharges from the hospital fiscal year that ends during the federal fiscal year prior to the fiscal year that serves as the first payment year in the determination of the Medicaid Share amount.

The Bureau will use auditable data sources to calculate the Medicaid aggregate EHR hospital incentive amounts. Auditable data sources include: (1) Provider's Medicare/Medicaid cost reports; (2) Payment and Utilization information from MMIS (or other automated claims processing systems or information retrieval systems); and (3) Hospital financial statements and accounting records. The following primary source documents will be used in the determination of the following components the Medicaid Share of the aggregate EHR Incentive Payment for EHs:

Component	Primary Source Document	Secondary Source Document
Average Annual Growth Rate of Discharges	Applicable HFY Medicare/Medicaid Cost Reports (2552-96, W/S S-3,Pt I, Col. 15, Ln 12)	Hospital Generated Data from its accounting and billing systems
Estimated Medicaid I/P Bed Days	Applicable HFY Medicare/Medicaid Cost Reports (2552-96, W/S S-3,Pt I, Col 5, Lines 1 and 6-10)	Hospital Generated Data from its accounting and billing systems and Summary MARS Reports generated via MMIS
Estimated Medicaid MCO I/P Bed Days	Applicable HFY Medicare/Medicaid Cost Report (2552-96, W/S S-3,Pt I, Col 5, Ln 2) and hospital supplied data on PACE I/P days from contracting hospitals' accounting and billing systems	Medicaid MCO encounter data and Medicaid MCO Generated Data from hospital accounting and billing systems
Estimated Total	Applicable HFY Medicare/Medicaid Cost	Hospital Generated Data from its accounting

Component	Primary Source Document	Secondary Source Document
I/P Bed Days	Report (2552-96, W/S S-3,Pt I, Col 6, Lines 1, 2, and 6-10)	and billing systems
Estimated Total Hospital Charges	Applicable HFY Medicare/Medicaid Cost Report (2552-96, W/S C, Pt I, Col 8, Ln 101)	Hospital Generated Data from its accounting and billing systems
Charity Care Charges	Applicable HFY Medicare/Medicaid Cost Report (2552-96, W/S S-10, Col 1, Ln 30) adjusted for Bad Debts	Hospital Generated Data from its accounting and billing systems

SCDHHS normally supplies each contracting hospital with a Summary Management and Administrative Reporting System (MARS) listing of inpatient and outpatient hospital charges and payments that is used by the hospital in its preparation of its annual fiscal year end cost report. As part of the SCDHHS Medicaid inpatient and outpatient cost to charge ratio determination, SCDHHS reconciles Medicaid routine and ancillary charges as well as Medicaid inpatient days to the providers cost report. MMIS data normally supersedes all data sources unless the provider provides supporting documentation to support the use of its own data.

The aggregate EHR incentive amount is equal to the sum over four years of the base amount of $2 million each year plus the discharge related amount defined as $200 for the 1,150th through the 23,000th discharge for the first payment year. For subsequent payment years, the SCDHHS will assume discharges increase by the provider's average annual rate of growth for the most recent three years for which data are available per year (which will be the provider's cost reporting fiscal year end). Note that if a hospital's average annual rate of growth is negative over the three year period, it will be applied as such. Transition factors are applied to years one through four in the following amounts; Year One - 1; Year Two - .75; Year Three - .5, and Year Four - .25.

The "Medicaid Share", which is applied against the aggregate EHR incentive amount, is essentially the percentage of a hospital's inpatient non-charity care days that are attributable to Medicaid inpatients. The Medicaid inpatient days will include both in-state and out-of state Medicaid days for the following individuals/enrollees:

- Medicaid fee for service program (includes the MHN enrollees);
    - South Carolina Medicaid MHN: South Carolina Solutions, Carolina Medical Homes, Palmetto Physician Connections
- Medicaid MCOs;
    - South Carolina Medicaid MCOs: First Choice by Select Health of South Carolina, United Healthcare Community Plan, Absolute Total Care, BlueChoice Health Plan of South Carolina
- Medicaid PIHPs;

- There are no Medicaid PIHPs in South Carolina.

- Medicaid PAHPs;
  - There are no Medicaid PAHPs in South Carolina.
- Medicaid Program of All Inclusive Care for the Elderly (PACE) Programs and;
  - SCDHHS will require the hospitals that contract with the two PACE Programs operating within the state to provide the number of Medicaid inpatient hospital days served during the applicable hospital fiscal year end reporting period that will be used to determine the incentive payments to the qualifying hospitals.
- Medicaid with commercial insurance carrier (only include Medicaid days where Medicaid paid all or part of the claim)

The formula is as follows:

$$\frac{\text{Estimated Medicaid inpatient bed days + Estimated Medicaid MCO inpatient bed days}}{\text{Estimated total inpatient bed days * [(estimated total charges – charity care charges)/estimated total charges]}}$$

The Medicaid agency will not include inpatient days attributable to individuals with respect to whom payment may be made under Medicare Part A or under Medicare Part C (Medicare Advantage Plans). Therefore, no dual eligible days will be included in the numerator of this formula.

The estimated total charges and charity care charges amounts used in the formula must represent inpatient and outpatient hospital services only and exclude any professional charges.

Only those days that would count as inpatient bed days for Medicare purposes under section 1886(n)(2)(D) of the Act will be allowed in this calculation.

In the event there is simply not sufficient data that would allow the Bureau to estimate the inpatient bed days attributable to Medicaid managed care patients, the statute directs that such figure is deemed to equal zero.

In the event there is simply not sufficient data that would allow the Bureau to estimate the percentage of inpatient bed days that are not charity care, that is [(estimated total charges-charity care charges)/estimated total charges], the statute directs that such figure to be deemed to equal one.

An EH must continue to meet the requirements for eligibility for the incentive and submit an attestation via the S.C. Medicaid State Level Repository each payment year. SCDHHS will pay out the aggregate payment amount over three payment years as the EH continues to meet program requirements: 50% the first payment year, 40% the second payment year, and 10% the third payment year. Additionally, in any given year, no payments can be made to hospitals after 2016 unless the provider has been paid a payment in the previous year; thus, hospitals receiving a Medicaid incentive payment must receive payments on a consecutive annual basis after the year 2016. Prior to 2016, Medicaid incentive payments to hospitals can be made on a non-consecutive annual basis.

Prior to issuing payment to the EH, the HIT Division will verify that the EH has not received a payment from another state or already received a payment from South Carolina for that payment year. The HIT Division will initiate an electronic credit adjustment that will be processed by the legacy MMIS system. Each user that creates adjustments in the system will have a unique ID for tracking purposes, and incentives will be tracked with new fund codes. Payments will be made via EFT. As providers are determined eligible to receive payments, their incentive payments will be incorporated into the weekly payment schedule within 45 days of the transaction from the CMS NLR that denotes the provider's account as locked for payment (the D16Response). The HIT Division notifies the provider of the payment via e-mail; and, if the provider has reassigned the incentive, the HIT Division will mail a printed letter to the Payee via USPS. The SLR will submit payment data to the NLR.

Payments under the Medicare and Medicaid EHR Incentive Programs will be treated like all other income. The incentive payment legal authorities do not supersede any state or federal laws requiring wage garnishment or debt recoupment; therefore, if there is a legal basis for the state or federal government to net or recoup debts, such authority will apply to incentive payments, just as it applies to all other income.

Incentive Payment Reassignments to Employers

EPs have the option of reassigning their incentive payment to an entity with which there is a contractual arrangement allowing the employer or entity to bill and receive payment for the EP's covered professional services. Incentive payments can only be reassigned to a single TIN.

SCDHHS will require providers to enter payment reassignment data into the SLR as South Carolina's MMIS does not house data related to employee-employer relationships.

Incentive Payment Reassignment to an Entity that Promotes the Adoption of Certified EHR Technology

SCDHHS has established a mechanism to designate entities that promote the adoption of certified EHR technology. CITIA, the sole Regional Extension Center for South Carolina, is the only entity in South

Carolina that meets this definition as it is the designated recipient of the Regional Centers Cooperative Agreement and therefore meets the definition of an entity that promotes the adoption of certified EHR technology.

SCDHHS will require that CITIA submit documentation to SCDHHS that ensures that no more than five percent of the Medicaid incentive payment is retained for costs unrelated to EHR technology adoption. CITIA will also be subject to audit. Further, when an EP chooses to assign his/her payment to CITIA, the EP must select this option in the SLR and will receive a message screen that this payment arrangement is voluntary by the EP before the EP may click the button in the SLR that will assign the payment to CITIA. SCDHHS will establish a special payment process outside of the MMIS to accommodate this type of payment reassignment, as needed.

Recouping Incentive Payments Based on Debts and Wage Garnishment

SCDHHS maintains a check pull list that is updated weekly in order to hold provider checks that require a legal basis to withhold monies. There are many reasons a provider could be placed on the check pull list, but some examples include suspicion of fraud, state and federal withholding, hospital advances, and failure to submit cost reports.

SCDHHS is required to recoup public debts. Therefore, any provider who meets the requirements to receive an incentive payment from the SC Medicaid EHR Incentive Program who has an outstanding public debt will have his/her incentive payment reduced to account for the debt.

SCDHHS also maintains a record of providers with an outstanding debit balance. If a provider has an outstanding debit balance and is not on the check pull list, the incentive payment will be reduced to account for the outstanding debit balance.

Denials and Appeals

The SCDHHS Division of Appeals and Hearings currently has a process for appeals filed by Medicaid providers and beneficiaries when payments or benefits have been denied (see Appendix D for the Medicaid Appeals Regulations). The procedures for appeals may be found in South Carolina Regulations at Chapter 126, Article 1, Subarticle 3. No additional rules processing time or provider notice time is needed as the policies and procedures for the existing process require no modifications to encompass EPs and EHs who appeal the following:

- Denied incentive payments
- Incorrect incentive payment amounts
- Program eligibility determinations (e.g., patient volume, hospital-based EPs)

- Demonstration of adopting, implementing, and upgrading
- Demonstration of meaningful use

Information concerning the appeals process will be available in the provider manual of policies and procedures for the South Carolina Medicaid EHR Incentive Program. EPs and EHs may submit "timely" appeals to the Division of Appeals and Hearings with relevant support documentation. "Timely" is defined as a provider filing an appeal within 30 days of notification of determination of eligibility (pertains to program eligibility, demonstration of adopt/implement/upgrade, and demonstration of meaningful use) or incentive payment receipt. SCDHHS' notification letters will reference the regulations for appeals. A hearing officer will review the appeal request, and the EP/EH will be notified and a hearing will be scheduled. The HIT Division will compile documentation for the hearing, and any appeal requests will be tracked in the appeals and hearing system maintained by the Division of Appeals and Hearings.

The current SCDHHS appeals process allows for settlement negotiations prior to any hearing. SCDHHS anticipates that these settlement negotiations will be useful for situations where providers are not clear about the requirements for program participation such as EP and EH types, volume requirements, etc.

Section E: The Audit Strategy

The Division of Audits, along with the divisions of Program Integrity (PI) and Surveillance and Utilization Review (SUR), is in the SCDHHS Bureau of Compliance and Performance Review. This bureau ensures that Medicaid and other funds are used effectively and in compliance with federal and state regulations. Existing processes will be expanded to include audits of the EHR Incentive Program.

The HIT Division is responsible for pre-payment validation and monitoring of eligibility and attestation. The Division of Audits is responsible for post payment audits, both targeted and random. This maintains separation of duties and provides checks and balances. Provider attestations that raise no concerns are approved for payment but remain subject to random selection for audit. Providers that fail any HIT validation tests are automatically referred to the Division of Audits for detailed review prior to release of incentive payment.

There are three components to the SCDHHS audit strategy related to the EHR incentive program:

1. SCDHHS will validate provider eligibility and AIU attestations before payments are disbursed. This will avoid improper payments and ensure only EPs and EHs that meet all incentive funding requirements receive funds.

2. SCDHHS will ensure meaningful use through a combination of monitoring / validation *before* payments are disbursed and selective audits *after* payments are disbursed.

3. SCDHHS will prevent / identify suspected fraud and abuse through data analysis and selected provider audits.

Suspected fraud or abuse involving EHR incentive payments can be reported through existing means such as the department's fraud hotline and fraud email account.

SCDHHS has employed several methods in order to reduce provider burden while maintaining integrity and efficacy of the oversight process. The SLR will provide providers with accessible information on the program to reduce the program's complexity. Also, the State Medicaid HIT Plan is maintained on the SCDHHS HIT Web page. Further, SCDHHS intends to effectively communicate with CITIA to ensure that CITIA shares accurate information with providers regarding the South Carolina Medicaid EHR Incentive Program. CITIA will also advise providers of their obligation to retain auditable documentation for at least six years from the last year of participation in the program in the event that SCDHHS invokes its right to audit and review such records.

Methods Used to Avoid or Detect Improper Payments

SCDHHS will validate eligibility information provided to the NLR plus other provider information. Specifically, the HIT Division will verify information submitted on the NLR and SLR including:

- Provider demographic data including NPI, TIN, etc.
- Provider licensure and exclusion status
- Whether the provider is hospital-based
- Whether a PA is at a PA-led RHC / FQHC
- CMS Certification number and ONC CHPL numbers
- Contracts and other supporting documents for the adoption, implementation, or upgrade to certified EHR technology

Data sources used to verify certain eligibility components include:

- MMIS
- Provider enrollment files maintained by MCCS
- OIG exclusion list
- Program Integrity State exclusion list
- State licensing boards
- ONC Certified Health IT Product List
- Data provided through SCORH and SCPHCA

To avoid making improper or duplicate payments, the policies and procedures of SCDHHS require that the HIT Division verifies receiving a positive D16 response from the NLR that ensures that the provider has not yet been paid for the payment year. An audit trail will be maintained containing the date/time of NLR files sent and received.

In general, eligibility monitoring and validation will be carried out by SCDHHS project coordinators in the HIT Division. All EP attestations will be submitted through the SLR. The Division of Audits will validate patient volumes attested by the providers on a post-payment basis and also on a pre-payment basis upon referral by the HIT Division.

It is important to note that SCDHHS will not audit the CHIP adjustment applied to EPs and EHs that attest to meeting the Medicaid patient volume threshold. The CHIP adjustment factor is determined by SCDHHS; therefore, SCDHHS believes it would impose an unfair requirement to audit as EHs and EPs do not provide the CHIP adjustment factor.

The Division of Audits will periodically monitor incentive payments to identify any duplicate payments and any payments that don't follow funding schedules (these could be underpayments or

overpayments.). Incentive payments are monitored and reported using the same process as other Medicaid payments using the policies and procedures documented for the MMIS. EHR payments are processed through the South Carolina MMIS, which provides another guarantee on the validity of provider TINs, and edits and fund codes are applied in order to separately track EHR payments. Payments will be reported through the CMS-64 financial report and monitored through that process as well as the Statewide Single Audit.

The Division of Audits will conduct an internal audit of agency management controls over the incentive payment eligibility determination and disbursement processes, within 15 months of the disbursements of the first EHR incentive funds.

Methods to Ensure Compliance with AIU and Meaningful Use Requirements

The Regional Extension Center, through the work of CITIA assisting EPs and EHs to meet the requirements for meaningful use, will foster the self-assessment of eligibility and attestation information by EPs before application for the EHR incentive funding is made; this will lower the risk of noncompliance with the EHR incentive payment requirements. This is expected to reduce the number of formal audits required post-payment.

EPs and EHS will use the NLR and SLR to attest to AIU and meaningful use. Existing internal and external SCDHHS data sources will be leveraged to the maximum extent possible to verify meaningful use. The planned interface from SCHIEx to the DSS/SURS will support reporting on meaningful use. SCHIEx reports demonstrating provider connections to SCHIEx will also be used to verify meaningful use. Similarly, reports on the immunization registry run by SCDHEC may be useful to cross check meaningful use. First Health reports from SureScripts reports showing statistics related to ePrescribing will be leveraged to confirm attestation of meaningful use.

Methods to ensure compliance with AIU and meaningful use include:

- Providers must attest that they have adopted, implemented, or upgraded to certified EHR technology and that they are able to provide documentation of legal or financial commitment to the certified EHR technology. EPs and EHs selected for audit may also be requested to provide invoice copies and payment histories.
- Providers must attest to AIU before any incentive funds are released.
- In subsequent payment years, providers must attest to and be able to demonstrate meaningful use based on the following methodology:
    - Connection to an HIE
    - Submission of data that meets meaningful use criteria for applicable stage. Demonstration of meaningful use will be verified through direct audit requests for

supporting documents, SCHIEx reports, and additional external data sources such as SureScripts, SCDHEC, and EHR vendor reports.

- SCDHHS project coordinators in the HIT Division will conduct initial validation and monitoring of AIU and meaningful use.

SCDHHS Division of Audits will conduct random and targeted audits, in order to verify information provided through attestations of AIU and meaningful use.

Methods to Identify Improper Payments, Overpayments, Fraud, and Abuse

As noted, the HIT Division will be responsible for up-front review of provider eligibility and AIU attestations. This is a thorough initial screening that identifies providers with irregularities that can include license issues, eligibility restrictions, and pending or past investigations by several authorities. Providers that fail any HIT validation tests are automatically referred to the Division of Audits for detailed review prior to release of incentive payment. The SCDHHS Division of Audits will also identify providers for post-payment audits.

Audit Protocols

The Division of Audits has developed a detailed audit protocol designed to meet the specific objectives of the audit function described in this section. This protocol addresses the entire audit process and includes:

- Steps to obtain additional verification of a provider's license and eligibility to participate in the Medicaid program when needed for initial validation
- Steps to validate Medicaid and needy patient volume including claims data analysis
- On-site verification of selected providers' patient accounts
- Steps to verify adoption, implementation, and upgrade, which may include on-site review of the provider's use of EHR technology; obtaining documentation for proof of purchase, vendor agreements, etc; review of staff training records; and determination that the EHR technology used is certified
- Steps to provider verification and support when the HIT management staff determine that a provider may not be meeting meaningful use criteria, and a recoupment of funds is required

Audit steps will vary based on the choices EPs make in attestation:

- Individual/Encounter Method
- Individual/Panel (Assigned) Method
- Group Volume/Encounter
- Group Volume/Panel (Assigned) Method
- PA at an FQHC/RHC

Before initial contact is made with the providers selected for post-payment audit, the auditors will conduct a preliminary review and fact gathering. This will include obtaining all data submitted through the State's SLR; compiling in-house correspondence, emails, etc. with the provider, including any previous contacts with the Division of Program Integrity; determining who has already submitted invoices to support purchase of certified EHR products; categorizing those that have worked with CITIA to implement their technology; and confirming CMS EHR Certification ID.

The Division of Audits will also send providers an Audit Survey Packet, which will include a questionnaire and an engagement letter. The letter will explain SCDHHS Audit's role in review provider attestation data and will request supporting documents that may include:

- Documentation for calculation of Medicaid or needy patient volume
- Documentation for calculation of total volume
- Identification of practice professionals with titles, licenses and dates of employment
- Identification of any practice professionals that work or have worked during the reporting period concurrently at an additional practice
- Explanation of current uses of the certified EHR technology, and supporting documentation if the provider has attested to upgrading from existing EHR technology

Audit Target Selection

The Division of Audits will conduct both random and targeted audits. Selection for targeted audits is based on the following criteria:

- When there are indications that the EP or EH has reported invalid or questionable information. For example:
    - The Medicaid patient volume reported by the EP compared with claims data in the DSS indicates the attestation volume may be inflated or include CHIP beneficiaries
    - The EP or EH does not opt to upload documentation to support the AIU attestation
- If a provider becomes the subject of an unrelated program integrity review opened as the result of data mining or complaint about their Medicaid billing practices

- If sudden drops or spikes in Medicaid claims volume are noted after receiving incentive funds
- If it is determined that duplicative or excessive payments are received
- If a provider loses licensure, becomes part of a corporate integrity agreement, is terminated from the Medicaid program, and/or has his or her Medicare privileges revoked

In addition to targeted audits triggered by the factors listed above, a small number of providers will be selected at random every year for an audit of their program participation. Thus, every provider that has participated in the South Carolina Medicaid EHR Incentive Program has a chance of being reviewed. The number of random audits performed will be based on the total number of EPs and EHs who apply for an EHR incentive payment. Audits may include desk or on-site reviews.

Audit Benchmarks

The anticipated number of audits within the first two years of the program is approximately 52: two hospitals and 50 EPs, based on what is currently known about potential EHR adoption rates. This will assure approximately 10% audit coverage of hospitals and 5% coverage for EPs, assuming 20 hospitals and 1,000 EPs adopting, implementing and/or upgrading within the first two years of the program. The providers first selected for audit will be those meeting the target criteria described previously; the remaining providers will be selected at random, using a random number generator, until the benchmark of 52 audits is reached.

Audits will follow existing SCDHHS Internal Audit policies for planning, audit supervision, development for audit findings, and preparation of work papers.

If an audit identifies an overpayment or improper payment (one made to an ineligible professional or hospital), the amount of the overpayment determined will be recouped from the provider, in accordance with existing SCDHHS procedures. Repayments can be made either by check or through offsets to the provider's regular Medicaid claim reimbursements. Overpayments will be tracked through the Program Integrity case management system. Any EHR incentive funds recouped from providers will be identified on the CMS 64 in accordance with normal reporting procedures as well as any specific EHR Incentive funding reports. Payments will stop if in any given payment year meaningful use is not met.

If an audit finds indications of fraud, a referral will be made to the South Carolina Attorney General's Office, Medicaid Fraud Control Unit (MFCU), in accordance with existing SCDHHS policies and the MOU with the MFCU.

While the audits of EHR incentive fund providers will be carried out by the Division of Audits because of the nature of the compliance requirements involved, other processes, such as the overpayment tracking process, will be incorporated into those used by the Division of Program Integrity. SCDHHS does

not plan to use external contractors for post-payment audits of EHR incentive funds. This will be done internally with the addition of new audit staff.

Audit findings and conclusion will be reported in regular management letters to the HIT Division and agency executive staff.

An internal audit of the HIT Division is also planned as a mechanism to ensure that appropriate management controls are in place and are adhered to. Such an audit will make recommendations to SCDHHS HIT management for improvement in internal controls if warranted.

Conclusion

SCDHHS looks forward to continuing the South Carolina Medicaid EHR Incentive Program. This program will be a tremendous aid to providers in South Carolina. SCDHHS expects that the program will evolve over time, and as such, this SMHP will be treated as a "living" document and receive regular updates. Above all, it remains SCDHHS' goal to assist providers in becoming adopters and meaningful users of certified EHR technology.

Appendix A: Executive Order 2009-15

See following page.

State of South Carolina
Executive Department

FILED

OCT 16 2009

Mark Hammond
SECRETARY OF STATE

Office of the Governor

EXECUTIVE ORDER NO. 2009-15

WHEREAS, the Congress and President of the United States enacted the American Recovery and Reinvestment Act of 2009 (the Act), which provides for the expenditure of $500 billion in federal funds for infrastructure investment, health care and welfare programs, and other public works;

WHEREAS, the Act includes the Health Information Technology for Economic and Clinical Health Act of 2009 (the HITECH Act) that sets forth a plan for advancing the appropriate use of health information technology to improve quality of care and establish a foundation for health care reform;

WHEREAS, the HITECH Act authorizes the Centers for Medicare and Medicaid Services (CMS) to administer incentives to eligible professionals and hospitals to encourage the use of secure, electronic health records (EHRs);

WHEREAS, to achieve the goal of transforming the health care system through health information technology, three things must first be established:

- Clinicians and hospitals must acquire and implement certified EHRs in a way that fully integrates these tools into the care delivery process;
- Technical, legal, and financial supports are needed to enable information to flow securely and to support health care and population health; and,
- A skilled workforce needs to support the adoption of EHRs, information exchange across health care providers and public health authorities, and the redesign of work-flows within health care settings to gain the quality and efficiency benefits of EHRs while maintaining individual privacy and security; and

WHEREAS, health information technology systems are powerful tools that may be used to achieve outstanding quality in health care delivery, resource coordination, cost efficiency, and patient safety in the health care system.

NOW, THEREFORE, I hereby establish the Interim Governance Committee (Committee). The Committee's purpose is to recommend strategies and policies to successfully implement and sustain a statewide Health Information Exchange (HIE).

The Committee shall:

- Convene healthcare stakeholders and build trust and consensus among the stakeholders;
- Discuss ways to enhance the technical architecture and framework of the statewide HIE to promote the meaningful use of electronic health records by providers;
- Cooperate with stakeholders to develop appropriate standards for the statewide HIE's privacy, security, and interoperability that aligns with state and federal standards;
- Establish mechanisms to provide oversight and accountability to the HIE; and
- Advise and assist with the development of proposed enabling legislation to create a permanent governing body.

The Committee consists of the following members or their designees:

(1) President of the South Carolina Hospital Association;
(2) Chief Executive Officer of the South Carolina Office of Rural Health;
(3) President of the South Carolina Medical Association;
(4) Chief Executive Officer of the South Carolina Primary Health Care Association;
(5) President of the South Carolina Pharmacy Association;
(6) Director of the South Carolina Department of Health and Human Services;
(7) Director of the Budget and Control Board's Office of Research and Statistics;
(8) Commissioner of the Department of Health and Environmental Control;
(9) Chairman of the Board of the Lakelands Rural Health Network;
(10) President and Chief Executive Officer of Health Sciences South Carolina; and
(11) A consumer.

This Order is effective immediately.

GIVEN UNDER MY HAND AND THE GREAT SEAL OF THE STATE OF SOUTH CAROLINA, THIS 16TH DAY OF OCTOBER 2009.

MARK SANFORD
Governor

ATTEST:

MARK HAMMOND
SECRETARY OF STATE

Appendix B: Proviso 89.120.

89.120. (GP: Information Technology for Health Care) From the funds appropriated and awarded to the SC Department of Health and Human Services for the Health Information Technology for Economic and Clinical Health Act of 2009, the department shall advance the use of health information technology and health information exchange to improve quality and efficiency of health care and to decrease the costs of health care. In order to facilitate the qualification of Medicare and/or Medicaid eligible professionals and hospitals for incentive payments for meaningful health information technology (HIT) use, a health care organization participating in the South Carolina Health Information Exchange (SCHIEx) or a Regional Health Information Organization (RHIO) or a hospital system health information exchange (HIE) that participates in SCHIEx may release patient records and medical information, including the results of any laboratory or other tests ordered or requested by an authorized health care provider within the scope of his or her license or practice act, to another health information organization that requests the information via a HIE for treatment purposes with or without express written consent or authorization from the patient. A health information organization that receives or views this information from a patient's electronic health record or incorporates this information into the health information organization's electronic medical record for the patient in providing treatment is considered an authorized person for purposes of 42 C.F.R. 493.2 and the Clinical Laboratory Improvement Amendments.

Appendix C: H*4446

AN ACT TO AMEND SECTION 44-29-210, CODE OF LAWS OF SOUTH CAROLINA, 1976, RELATING TO MASS IMMUNIZATION PROJECTS APPROVED BY THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL AND THE PARTICIPATION OF MEDICAL PERSONNEL IN THESE PROJECTS, SO AS TO PROVIDE THAT LICENSED NURSES, RATHER THAN REGISTERED NURSES, ARE INCLUDED IN THE PERSONNEL WHO MAY PARTICIPATE IN THESE PROJECTS AND WHO ARE EXEMPT FROM LIABILITY; AND TO AMEND SECTION 44-29-40, RELATING TO THE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL HAVING GENERAL SUPERVISION OVER VACCINATION, SCREENING, AND IMMUNIZATION, SO AS TO REQUIRE THE DEPARTMENT TO ESTABLISH A STATEWIDE IMMUNIZATION REGISTRY, TO REQUIRE HEALTH CARE PROVIDERS TO REPORT THE ADMINISTRATION OF IMMUNIZATIONS TO THE DEPARTMENT, AND TO PROVIDE CIVIL PENALTIES FOR VIOLATIONS.

Be it enacted by the General Assembly of the State of South Carolina:

Medical personnel authorized to participate in mass immunization projects are exempt from liability

SECTION 1. Section 44-29-210 of the 1976 Code is amended to read:

"Section 44-29-210. (A) If the Board of the Department of Health and Environmental Control or the Director of the Department of Health and Environmental Control approves in writing a mass immunization project to be administered in any part of this State in cooperation with an official or volunteer medical or health agency, any authorized employee of the agency, any physician who does not receive compensation for his services in the project, and any licensed nurse who participates in the project, except as provided in subsection (B), is not liable to any person for illness, reaction, or adverse effect arising from or out of the use of any drug or vaccine administered in the project by the employee, physician, or nurse. Neither the board nor the director may approve the project unless either finds that the project conforms to good medical and public health practice.

For purposes of this section, a person is considered to be an authorized employee of an official or volunteer medical or health agency if he has received the necessary training for and approval of the department for participation in the project.

(B) Nothing in this section exempts any physician, licensed nurse, or authorized public health employee participating in any mass immunization project from liability for gross negligence, and the provisions of this section do not exempt any drug manufacturer from any liability for any drug or vaccine used in the project."

Immunization registry to be established

SECTION 2. Section 44-29-40 of the 1976 Code is amended to read:

"Section 44-29-40. (A) The Department of Health and Environmental Control shall have general direction and supervision of vaccination, screening, and immunization in this State. The Department of Health and Environmental Control has the authority to promulgate regulations concerning vaccination, screening, and immunization requirements.

(B) The department shall establish a statewide immunization registry and shall promulgate regulations for the implementation and operation of the registry. All health care providers shall report to the department the administration of any immunization in a manner and including such data as specified by the department. The department may make immunization information available to persons and organizations in accordance with state and federal disclosure and reporting laws. The department may seek enforcement of this section and issue civil penalties in accordance with Section 44-1-150."

Time effective

SECTION 3. This act takes effect upon approval by the Governor.

Ratified the 25th day of May, 2010.

Became law without the signature of the Governor -- 6/1/2010.

Appendix D: Eligible Hospital Charity Care Filing Documentation

South Carolina Department of Health and Human Services
Bureau of Reimbursement Methodology and Policy
Division of Acute Care Reimbursements
HFY _____ Inpatient Charity Care Filing
For EHR Incentive Payment Calculation Purposes

Hospital: _____

In order to calculate your hospital's EHR incentive payment, we need the following inpatient hospital charity care information provided electronically via an excel spreadsheet to include the following data fields from the UB 04.

Form Locator	**Line**	
FL03a		Patient Number
FL06	1	Period
FL09	2c	State
FL09	2d	Zip
FL12	1	Admission Date
FL47	1-22	Hospital Charge (appropriate Rev codes)
FL47	1-22	Physician Charge (appropriate Rev codes)
FL47	23	Total Charges
FL50	A	Payer ID
FL50	B	Payer ID
FL50	C	Payer ID
FL51	A	Payer ID Number
FL51	B	Payer ID Number
FL51	C	Payer ID Number

In addition to the above data fields, each account must also include the following information:

Hospital Cash Received
Hospital Adjustment

Physician Cash Received
Physician Adjustment

Current Balance on
Account

I hereby certify that I have examined the information furnished on this form, and that to the best of my knowledge and belief, it is a true, complete and accurate representation of the hospital records. Supporting documentation will be available at the hospital for SCDHHS review.

Authorized Representative's Signature and Date _____

Contact Person Name (PRINT) and Phone Number _____

Contact Person E-Mail Address _____

Appendix E: Medicaid Appeals Regulations

CHAPTER 126.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

(Statutory Authority: 1976 Code Section 44-6-90)

ARTICLE 1.

ADMINISTRATION

SUBARTICLE 3.

APPEALS AND HEARINGS

126-150. Definitions.

A. Agency--The Department of Health and Human Services and its employees.

B. Appeal--The formal process of review and adjudication of Agency determinations, which shall be afforded to any person possessing a right to appeal pursuant to statutory, regulatory and/or contractual law; Provided, that to the extent that an appellant's appellate rights are in any way limited by contract with the Agency or assigned to the Agency, said contractual provision shall control.

C. Hearing Officer--Any Agency employee appointed by the Director to make Decisions either affirming or reversing Agency program determinations by setting forth findings of fact and conclusions of law in appeals arising under this regulation.

D. Person--An individual, partnership, corporation, association, governmental subdivision, or public or private agency or organization.

E. Provider--A person who provides services to individuals under programs administered by the Agency.

126-152. Appeal Procedure.

A. An appeal shall be initiated by the filing of a notice of appeal within thirty (30) days of written notice of the Agency action or decision which forms the basis of the appeal. The failure to file the requisite notice of appeal within the thirty (30) day period specified above shall render the Agency action or decision final; provided, that should the written notice specify some period to appeal other than thirty (30) days, that period shall apply; provided, that the requirement that written notice be given by the Agency shall not be applicable to situations where applicants for

Medicaid benefits acquire the right to appeal when the Agency fails to act on the application within the time period specified by federal regulation.

B. The notice of appeal shall be in writing and shall be directed to Appeals and Hearings, Department of Health and Human Services, Post Office Box 8206, Columbia, South Carolina 29202-8206. In appeals by providers, the notice of appeal shall state with specificity the adjustment(s) or disallowance(s) in question, the nature of the Issue(s) in contest, the jurisdictional basis of the appeal and the legal authority upon which the appellant relies.

C. If a notice of appeal does not satisfy the requirements of paragraph (B) above, the Hearing Officer, upon his own motion or by motion by an adverse party, may require a more definite and certain statement.

126-154. Hearing Officer.

A Hearing Officer has the authority, among other things to: direct all procedures; issue interlocutory orders; schedule hearings and conferences; preside at formal proceedings; rule on procedural and evidentiary issues; require the submission of briefs and/or proposed findings of fact and conclusions of law; call witnesses and cross-examine any witnesses; recess, continue, and conclude any proceedings; dismiss any appeal for failure to comply with requirements under this Subarticle.

126-156. Prehearing Conferences.

The Hearing Officer, within his discretion, may direct the parties in any appeal to meet prior to a formal hearing for the purpose of narrowing the issues and exploring the possibilities of settlement of matters in contest.

126-158. Hearing Procedures.

A. All parties to an appeal shall have the right to be represented by counsel, call witnesses, submit documentary evidence, cross-examine the witnesses of an adverse party, and make opening and closing statements.

B. Representation in Proceedings. A business entity, an agency, or an organization may elect to be represented by a non-attorney in an administrative hearing with the approval of the presiding hearing officer; non-lawyer persons including Certified Public Accountants, an officer of a corporation, or an owner of an interest in the business entity must present proof of unanimous consent of the owners or officers of the business entity before being allowed to proceed as representatives. Attorneys licensed in other jurisdictions must obtain a Limited Certificate of Admission, or such other leave as required by the South Carolina Supreme Court, before being allowed to proceed as representatives. This regulation in no way limits a person's right to self-representation, or to be represented by an attorney, or to be

represented by a non-attorney of his or her own choosing, when such non-attorney representation is allowed by law.